

SCENARIO FOR TRAFFIC-CALMED LONDON

TIM PHAROAH

Reader in Transport Studies, South Bank University

1. The Problem

London, like all large cities, suffers from the damaging effects of road traffic. These include delays, unreliable journey times, accidents, severance and noise and air pollution. These problems are serious enough by themselves, but together they create a powerful negative feature of life in the city. Many people take themselves and their businesses to places away from the worst affected areas, and ultimately this process could destroy the vitality of London, as it has so many north american cities.

The improvement of traffic and environmental conditions is thus is not an optional luxury, but an essential requirement to maintain London's competitive position. (See Pharoah 1992.)

2. Excessive speed or volume?

Even low volumes of traffic can cause problems in residential or shopping streets if drivers travel fast or aggressively, or if the street has hazardous design features. The main task of traffic calming is to reduce this impact by the promotion of slow and steady driving.

However, the potential improvements to be gained from traffic calming are inversely proportional to the volume of parked and moving vehicles. In many parts of London, especially the inner and central areas, traffic calming alone cannot provide the full solution: traffic reduction will also be necessary.

3. Urban-friendly transport strategy

London requires a transport strategy with three broad aims:

- Less travel (eg. planning and pricing measures to reduce distances),
- Switch from car to other modes (using "sticks" to discourage car use, and "carrots" to encourage travel on foot, cycle and public transport),
- Urban-friendly design (offering tangible safety and environmental benefits).

Traffic calming is concerned primarily with the third aim, but in turn contributes to the other two.

Traffic calming is thus an important technique for delivering benefits at street and local community level. It is not a complete answer to London's transport problems, but equally the wider problem of London's competitiveness cannot be tackled without it.

We can summarise the benefits of traffic calming as follows:

- Less accidents
- Safe and comfortable streets
- Less noise and fumes
- Stronger economic and social communities.

4. Traffic calming in London

Traffic calming is now an established part of transport policy and does not need further explanation here.

Compared to many other cities in North West Europe, London was slow to develop the technique, but progress in the past two or three years has been rapid. Most Boroughs have adopted some kind of policy or programme and have implemented local schemes. Some have a special budget for the purpose.

For most Londoners, traffic calming is probably associated with the speed hump. Other techniques (chicanes, optical narrowing, etc.) are less commonly found. Gradually, streets are being redesigned to make life easier for pedestrians and other users. Main roads as well as residential streets are beginning to feature in traffic calming plans. However, schemes predominantly have been aimed at reducing accidents, and other objectives have been secondary if not absent.

Despite the progress made, traffic calming remains the exception rather than the rule. It is therefore appropriate to consider what direction future policy might take.

Debate about future traffic calming strategy has occurred in London, but perhaps needs a wider hearing. The author was involved in the first area-wide examination of traffic calming possibilities in London, carried out for the Department of Transport with Llewellyn-Davies Planning and Ove Arup and Partners as part of the East London Assessment Study (ELAS) (Ove Arup, 1989). That work and its subsequent development (see Devon C.C. 1991 and MVA 1992) forms the basis of what follows.

5. Scenario for traffic-calmed London

What would London be like if it were fully traffic-calmed?

Roads and streets would be graded not only by their traffic significance, but also by the other activities which take place in them. This grading would be expressed in terms of the priority accorded to different street users, and the maximum speed of motor vehicles.

The whole road network would be classified as follows:

LIVING PRIORITY	20 mph streets where priority is given to residential or other street activity.
MIXED PRIORITY	20 - 30 mph sections of main traffic roads with shopping or other important non-traffic activity.
TRAFFIC PRIORITY	30 mph roads where traffic movement has priority, but where vulnerable road users are protected.

The great majority of the network (over 80% of London's 13,000 kilometres of road) would fall into the first category. Physical measures would be needed at frequent intervals to ensure self-enforced slow and steady driving compatible with pedestrian and other activity. Environmental enhancement would be important to reinforce the change of priority and to gain its acceptance by all road users.

The main traffic routes would fall into one of the other two categories, depending on the intensity of frontage activity. Most of their length would be "traffic priority". Provision would be made to protect pedestrians and cyclists. Buses and perhaps goods vehicles would be accorded priority in the flow of traffic. The usual 30 mph speed limit would apply.

Those sections of main road with intense frontage activity, mostly shopping centres astride the main road (eg. Streatham, Lewisham, Camden), would become "mixed priority" areas. Speeds would be lower and vehicles passing through would have to relent to pedestrians, cyclists, turning traffic, buses, vehicles loading and parking, and so on. The ELAS study indicated that about 10% of main roads would require "mixed priority" status, and Upper Street, Islington was explored as a case study of what this would mean in design terms.

6. Is it feasible?

Experience from several countries (including 20 mph zones in England) leads us to expect a reduction of serious and fatal road injuries of at least 50%. Quite apart from other benefits, this alone would be likely to produce an economic return on traffic calming investment. The total cost of comprehensive traffic calming on the model outlined above could be in the order of £300-500 per head, depending on the quality. Spread over an implementation period of 10 or 15 years, this seems a reasonable investment to rescue London from its environmental traffic problems.

Although it is widely believed that comprehensive physical speed restraint measures are needed for effective traffic calming, a different approach is emerging in Germany and other countries:

- Blanket 20 mph (30 kph) speed limit except main roads,
- Public awareness campaigns to encourage compliance,
- Physical measures only at sensitive locations such as schools, difficult junctions.

Given the constraints on local government finances, and the continuing priority accorded to expanding inter-urban road capacity in Government expenditure plans, a re-appraisal of the current

reliance on engineering measures may be necessary.

7. Automatic speed control

A possible alternative to engineering measures is the automatic control of vehicle speeds by the installation of variable speed governors in all vehicles. The maximum speed and acceleration would be switched according to the legal speed limit, for example 20 mph in residential areas, 30 mph on urban main roads, and 60 mph on motorways. Prototype equipment using manual switching has been successfully demonstrated in Germany. Automatic switching would require investment in roadside equipment, perhaps in conjunction with road pricing beacons. In view of the potential for avoiding the widespread use of uncomfortable and often unsightly humps and chicanes for speed reduction purposes, this system is surely worthy of further investigation and trials?

8. Traffic calming and the Red Routes

The main road strategy outlined above is entirely consistent with the need to make more effective use of London's Priority Network Plan (Traffic Director for London, 1993). The term "effective", however, must be taken to mean effective especially for the most valuable categories of road user, if necessary at the expense of the individual vehicle user. Mostly, benefits can be achieved for all categories of traffic and activity, by the intelligent re-ordering of the space between the buildings.

9. Conclusion

The benefits of traffic calming are now widely accepted and schemes are being introduced in many parts of London. Traffic calming should be seen as part of a wider strategy which includes less car travel, promotion of the environment-friendly modes, and environmental improvements. Such a strategy is not an expensive luxury, but a necessity in the fight to retain the vitality and appeal of city life.

London, after all, offers a "travelstyle" that is more environmentally sustainable than that attainable by the car-dependent residents of lesser towns.

REFERENCES

MVA consultancy, "South Birmingham Environmental Traffic Management Study (SOBETMA)", for Birmingham City Council, August 1992.

Ove Arup & Ptnrs, Llewellyn-Davies Planning, "East London Assessment Study: Report on transport options" (ELAS), for Department of Transport, December 1989.

Pharoah, T, "Less traffic, better towns", Friends of the Earth, 1992.

Pharoah, T, and others, "Traffic calming guidelines", Devon County Council, 1991.

Traffic Director for London, "Priority Network Plan", 1993.