

# Traffic Calming – The Good, the Bad and the Ugly

Tim Pharoah

Under this title, borrowed from a film, Tim Pharoah summarises the character and range of traffic calming schemes in Britain. The Good schemes have succeeded in reducing the severity of road casualties and have improved the appearance of streets. The Bad ones are poorly conceived and have produced negative reactions. Many have been done on the cheap and include features that are intrusive on the urban scene; these are the Ugly ones.

'Traffic calming' is a misnomer. The speed and behaviour of vehicles cannot be influenced except by the people who drive them. So 'driver calming' would be more accurate. Physical features in the street such as humps in the carriageway cannot control the speed of vehicles – there is no connection between the hump and the brake pedal. It is the driver's psychological reaction to the street that influences behaviour. This is important because it emphasises the point that design is integral to function. In order for a scheme to work well and shift priority away from vehicles, the street design must shift the appearance away from highway to urban living space. Unfortunately, practitioners in Britain have mostly ignored this, and have treated traffic calming purely as a matter of traffic engineering. There are exceptions to this especially in the centres of historic towns.

Traffic calming has been effective in reducing the severity of road casualties, and consequently enjoys wide public support. But has it led to our towns and cities becoming more liveable? Do they look more beautiful? Are we more inclined to linger and enjoy our surroundings rather than just rush from A to B? Are we more inclined to feel proud of the places we live in?

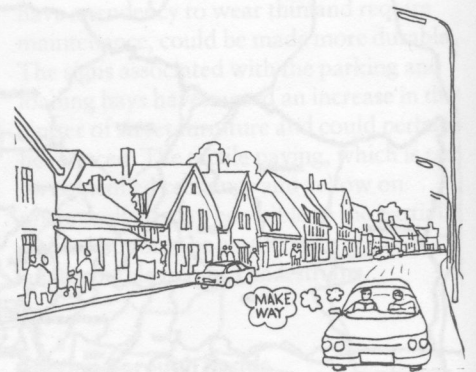
## Shared Space, Woonerf, Home Zone...

It is interesting to reflect on the different motives for traffic calming. It all began in the Netherlands. The primary objective was to create more public spaces that could encourage and support living rather than simply fulfil traffic functions. The organising principle was simple: the urban public realm (including roads) was divided into two categories, namely 'living areas' and 'traffic areas'. In living areas, streets were to be rebuilt so that people walking, talking, playing, resting, were given the opportunity to do so in safety and without intimidation by fast moving vehicles.

Segregation of pedestrians and vehicles, the paradigm that had driven urban design and layout in the 1950s and 1960s was abandoned in living areas. Integration became the new paradigm. It was recognised that vehicles can mix with people on foot provided that they are driven at low speed and in a calm manner. The key to the concept was that streets can be redesigned to convey to the driver that he or she should behave as a guest rather than as an invader of people's living space. This was the idea behind the Dutch Woonerf, which literally translated means 'home yard', but which had social connotations of a cosy living space. The Dutch designers of the first schemes in Delft in the early 1970s understood that the key to influencing driver behaviour was through the design and appearance of the street, with regulations playing a secondary role.

This concept was followed in Germany (verkeraeruhigung, or traffic calming), and briefly in Denmark with 'Rest and Play' areas. By 1985 the concept was established with supporting regulations, and an internationally agreed sign. But problems soon became clear:

- Rebuilding streets is costly, so money didn't stretch very far;



# Streets for Living



- Streets suitable for conversion cover only a tiny proportion of residential streets;
- People on foot feel insecure without a dedicated space (footway);
- Shared spaces are prone to being littered with cars parked right up to the buildings.

In addition Dutch research soon established that 20 mph (30 kph) zones could achieve most of the casualty reduction at a fraction of the cost of the Woonerf, and could apply to the entire residential network. Denmark arrived at this conclusion early on, and never really pursued the shared space solution.

The emphasis in Germany varied. Redesigning streets so that it is safe for children to play is particularly valuable in residential quarters with apartments with little private space. It is of little use in suburban situations where every dwelling has a garden. It was found in Germany that shared spaces were especially well used in areas with immigrant populations, perhaps from cultures in which street life plays a key social role. Such ideas do not relate strongly to the typical British suburb populated mainly by middle class whites. In southern Germany, the home of Europe's largest motor manufacturing industry, traffic calming was strongly resisted. In Bavaria, for example, a law was passed forbidding the installation of speed control humps. But street redesign was welcomed as a city beautification measure. Granite surfaces, bespoke street furniture and stylish landscaping are to be found in profusion in almost all south German cities, and as well in many parts of Austria and Switzerland.

In Britain the 'Home Zone' has arrived a quarter of a century after the birth of the idea!! Ironically the Woonerf as a technique is now almost dead in the Netherlands and Germany, so why should we adopt it in Britain? One answer to this is that other countries have already converted thousands of small residential streets, and there is scope to catch up in Britain. Shared space 'courts' have been built in Britain, and developers often like them because they are cheap to build, but they usually look a mess.

## 20 mph zones...

The pressure was on to reduce road casualties. The Woonerf or shared space solution was never going to provide the answer except in a limited proportion of urban streets. Characteristics necessary for successful shared space schemes were established in Northrhine Westfalia:

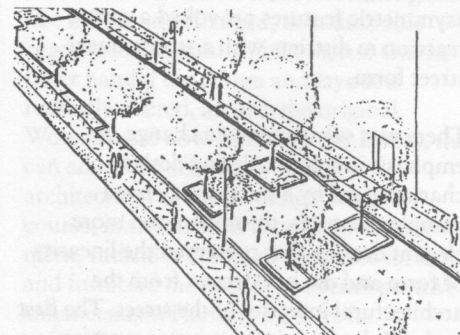
- Maximum vehicle traffic flow of around 200 vehicles per hour
- No through traffic
- No excess parking demand
- Active uses on both sides of the street

Only a small proportion of an urban street network met these criteria. Casualty reduction was therefore a matter of 20 mph zones. In Germany, a change of speed limit regulation was often sufficient to encourage slower driving, and physical measures were rarely used. In the Netherlands and subsequently in Britain, 20 mph zones could only be designated when physical measures were installed, or where speeds were already 20 mph or less. As an observer at the time, it struck me that Britain was taking the sensible line by learning from the Dutch and German experience, and thus moving straight to the widespread adoption of the 20 mph zone. This has been immensely successful, allowing casualty reduction across large parts of our towns and cities.

It was therefore something of a surprise when the Home Zone campaign emerged. Why should we in Britain be campaigning for something that had been tried and subsequently abandoned in other parts of northern Europe? Were the lessons different, or was nobody listening? Or, should we just wish good luck to the new Home Zones, and to the fortunate few who will benefit from them?

## Design and function

In terms of urban design, enormous tensions have built up between those attempting to create attractive city spaces, and those who are intent on imposing rigid highway or traffic engineering rules. Nothing destroys the designer's palette



Top left: Traffic separation  
Centre left: Traffic integration  
Left: Shared court in London's Docklands – definitely one of the ugly  
Top: Woonerf in Nijmegen – radically alters street appearance  
Above: Berlin Moabit – preserves linear qualities of the street

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Top: Delft – Tanthof East  
Above: Red Routes – can make main roads more liveable

more effectively than sight line requirements. But there are real issues as to what the street space should look like, and how it should be used. It is not enough to rename it a 'boulevard' or 'avenue', and expect traffic to disappear as if by magic.

The Woonerf resulted in a major change of appearance, and indeed the required impact on driver psychology demanded such major change. Labyrinthine characteristics were seen as necessary to discourage drivers from going at more than walking pace. It was very effective in this respect. But it also resulted in a big change of urban character. The shared space designs involving twists and turns, skewed parking bays, and other asymmetric features provoked a strong reaction in districts with a strong linear street form.

There was subsequently a change of emphasis in traffic calming design, characterised by a move away from complex features, to simpler and more elegant designs that preserved the linearity of form and did not detract from the architectural integrity of the street. The first and still the most impressive conversion based on this principle was the Moabit scheme in Berlin.

But the change can be seen also in the evolution of social housing layouts in the Netherlands. In Delft this is shown in the contrasting developments of the Tanthof district. Tanthof West was developed in the 1970s, and is full of narrow twisting streets with many corners and nooks and crannies. Tanthof East was developed in the 1980s and had much cleaner lines. It is much easier to navigate both with a vehicle and on foot, and has a generally more pleasing appearance. More recent developments have maintained linear clean lines, but with variety supplied by the addition of crescents, circles, etc. Permeability is maintained throughout, but rat runs and excessive traffic speed are prevented by cutting routes at key points for vehicle movement.

Simpler and cleaner lines are easier with 20 mph zone design than with shared space or Home Zone designs. (The stricter speed reduction requirements of Home Zones