



Calming the madness

The backstreets of central Auckland, as with many other old inner city suburbs around the world, are woefully inadequate at coping with either traffic volume or speed. Many houses do not have garages (they were built before cars), therefore the cars are parked on both sides of a narrow streets and there's often little room left for two cars to pass each other. Speeding used to be a major problem; people from other suburbs were using the back streets of Ponsonby as a shortcut and putting lives at risk, especially around schools.

Those who believe that people respond best to enforcement would probably have put a cop with a radar

down the bottom of the street and watched with sanctimonious satisfaction as he issued 100 tickets a day. The problem is, because the people who were speeding were often not regular users of the back roads of Ponsonby, issuing each new offender with a ticket was unlikely to solve the problem, as he probably wasn't coming back for a while anyway, and as soon as the cop went away the old, bad habits would quickly return. Also, a speed camera wouldn't necessarily protect children, because speed cameras can only record unsafe speeds after they have happened, and that's not much consolation if your kid has just been run over.

In line with good town planning worldwide the Auckland City Council simply installed a series of speed bumps and other road obstacles on the side streets and some main roads. The problem of speeding drivers was reduced to much more manageable levels immediately.

This highly effective technique of modifying driver behaviour in high risk areas is called traffic calming and it often works without a single ticket being issued. It works because drivers instinctively modify their behaviour when faced with obstacles or restrictions in their path.

As the Victoria Transport Policy Institute website puts it: "Drivers tend to



maintain a speed that feels comfortable, based on the design (lane width, visibility, clearance) and use (traffic volumes, turning activity, pedestrian activity) of each stretch of roadway. As a result, simply reducing posted speed limits may do little to reduce actual traffic speeds. Effective speed reduction generally requires changing roadway design, or significantly increasing enforcement.”

It is traffic calming that probably offers the best hope for modifying driver behaviour around towns in the near future – traffic calming is cheap, highly effective and usually doesn't require significant levels of enforcement.

Speed bumps are certainly effective as a traffic calming device, but they are fairly crude and unsuitable for higher speed environments. Other devices are equally effective and do not require the driver to suddenly jam on the brakes as speed bumps do. Speed bumps tend to annoy the people who live nearby because they get sick of hearing cars suddenly slowing at all hours of the day and night. Lastly, drivers dislike speed bumps because they break the natural flow of driving. Fortunately speed bumps are not the only option.

You can calm traffic just as effectively without breaking the natural flow of driving by suddenly narrowing streets at fixed intervals, which will produce a natural instinctual response in the driver to slow his car.



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When a driver makes the decision to slow down he feels more in control, so there's far less frustration produced. You can also make the driver do a zig-zag, but drivers tend to resent them because they also artificially interrupt the flow of driving and are thus seen as punitive.

However, both these techniques are highly effective, but the crown jewel of the traffic calming regime is the roundabout.

Many accidents occur at intersections. A roundabout slows traffic down at a critical stage and completely eliminates problem drivers running red lights and stop signs. A roundabout is sufficiently large for even a drunk driver to notice.

As traffic researcher Gene Russell put it:

“Many people believe that traffic signals are the ultimate answer to safety at all intersections. They are not. People run red lights (and stop signs) and kill people. Modern roundabouts have been proven to be safer than traffic

signals by several studies in the USA and throughout the world.”

It is worth mentioning the distinction between traditional roundabouts, which are now termed 'traffic circles' and the modern roundabout, which has been carefully designed and purpose-built as a road safety and traffic calming device.

The Centre for Transportation Research & Training at Kansas State University has done extensive research on the subject and they had the following to say:

“In a recent IIHS study of 24 intersections in the USA where stop control and traffic signals were replaced with modern roundabouts, there was a:

- 39% overall crash reduction
- 76% injury crash reduction
- 90% fatal crash reduction

Efficiency: our studies show significant reductions in vehicle delay, queue length and stopping.

Modern roundabouts are not those big, old, high-speed traffic circles built years ago in Paris, London, Washington D.C., and other eastern cities. These older circles were designed for high-speed entry and multi-lane weaving - a dangerous combination. The potential for serious crashes is high and subsequently, most traffic circles generally have high crash rates.

In regard to pedestrian safety, US data is too limited to draw meaningful conclusions; however, several other countries report significant reductions in both numbers and severity of pedestrian crashes at modern roundabouts. For example, a Dutch study of 181 intersections converted to roundabouts reported a 73% reduction in all pedestrian crashes and an 89% reduction in pedestrian injury crashes.

The modern roundabout is the most efficient traffic control device that exists today, based on overall vehicle delay and queue length (number of vehicles backed up). This fact also has been proven by several studies in the US & worldwide” •



A modern roundabout, not to be confused with its less-safe predecessor, the

