

Area-wide Reduced Traffic Speeds: Benefits and barriers

By Bevan Woodward

Reduced traffic speeds, such as 30km/h in residential neighbours, retail precincts and employment centres, can be highly effective in improving the safety and pleasantness of walking and cycling.

Furthermore, reduced traffic speeds offer significant benefits to a wide range of stakeholders:

- There is less likelihood of a collision between road-users as every km/h speed reduction results in a 2% reduction of the crash rate (Source: NZTA's *Economic Evaluation Manual*)
- Should a crash occur, the risk of serious injury is greatly reduced (Source: CROW: *Design manual for bicycle traffic*, pg 185)
- Walking & cycling is far safer, not just in reality but in perception of safety - an often ignored but critical travel choice determinant (ARC Community Perceptions Survey 2007: Only 1% of Aucklanders regard cycling as "Always Safe")
- Traffic noise and emissions are reduced, consequently neighbouring property values are enhanced (Source: *Winning back the Cities* by Newman & Kenworthy, pg 40)
- Retailers can typically expect greater patronage (TEST London: *How traditional urban centres benefit from traffic calming*)
- Reduced congestion as slower traffic flow are inherently more steady (*Traffic: Why we drive the way we do* by Tom Vanderbilt, pg 119), there are less congestion-causing crashes and there is less traffic as more people are willing to walk and cycle.

Reduced traffic speeds have been implemented on an area-wide basis in northern Europe to significantly enhance the safety for all road users, in particular for pedestrians and cyclists. They have helped reverse a long-term decline in cycling, enhance the walking and liveability of streets, and reduce the road fatality rates to the lowest among OECD nations.

However, area-based reduced speeds are yet to be widely implemented in New Zealand. In fact the NZ Police typically allow a 10km/h exceedance, meaning most of our urban roads have an effective speed limit of 60km/h.

The key barriers to implementation of reduced speed limits, such as 30 and 40 km/h, appear to include:

- Concern that motorists will ignore the reduced speed limits and the belief that reduced speeds require expensive capital works
- That the rules for changing traffic speed limits are complex and restrictive
- That the average traffic speed is more important than the top speeds (eg: 85th percentile speed)
- A preoccupation with maximising traffic throughput, it is seen as a failure if we are unable to engineer a solution
- The belief that the best way to improve safety for cyclists is cycle lanes and bike paths
- The public don't want reduced speed limits

In response to each of these points:

Concern that motorists will ignore the reduced speed limits and the belief that reduced speeds require expensive capital works

Whilst each roading situation is unique, the degree of traffic calming necessary to support a reduced speed limit may be somewhat less than anticipated.

It does however require revisiting the way we view road safety, in particular the assumption that wider traffic lanes and longer sight lines are safer. In reality such roads encourage greater speeds and less attention to the road.

By introducing a degree of intrigue and uncertainty in to the roading environment, motorists slow down and pay attention. Techniques for this type of traffic calming can be done cost-effectively with well designed:

- Narrowing of lanes widths
- Planting of trees in the middle of the road
- Installation of pedestrian crossings
- Angle parking on one side of the road
- Removal of the painted centre line

David Engwicht (an Australian proponent of the intrigue and uncertainty concept) estimates that if 15% of motorists adhere to a reduced speed limit, then they become effective mobile traffic calming devices resulting in a significant average speed reduction.

That the rules for changing traffic speed limits are complex and restrictive

This is quite incorrect, the [enabling regulation](http://www.landtransport.govt.nz/rules/setting-of-speed-limits-2003.html) legislated in 2003: <http://www.landtransport.govt.nz/rules/setting-of-speed-limits-2003.html> under section 3.2(5) allows local councils freedom to set appropriate speed limits, eg 30km/h in residential, retail and employment neighbourhoods.

That the average traffic speed is more important than the 85th percentile speed

The average traffic speed is generally irrelevant when considering safe road conditions. Instead, we are concerned about the top speeds (eg: the 85th percentile) as it is these vehicles which intimidate vulnerable users and are more likely to cause casualties.

A preoccupation with maximising traffic throughput. It is seen as a failure if we are unable to engineer a solution

Engineering solutions are typically expensive and have long implementation timeframes. Reduced traffic speeds can be a far quicker and cheaper solution which can be an interim (until an engineering solution is initiated, designed, approved, funded and built) or a long-term solution.

Reduced speeds on urban arterial routes is best achieved by providing European style boulevards which cater for both the faster “movement” function and the slower “access” function with separated carriageways designed to suit their purpose.

The belief that the best way to improve safety for cyclists is cycle lanes and bike paths

It is often assumed that in order to improve cycling conditions, we need to implement physical cycling infrastructure (such as cycle lanes and bike paths). However the hierarchy approach recommended by the IHT places the priority on reducing the volume and speed of traffic.

In Munich 80% of streets now have a 30 km/hr speed limit. When streets are reconstructed and the speed limit reduced, it is **Munich's policy to remove existing cycle paths or cycle lanes** (if these are present), as mixed traffic is the safest form of travel for cyclists. (Read about the traffic calming experience in Munich - courtesy of ViaStrada's Axel Wilke [Velocity 2007 report](#)):

Given the political reluctance to spend money on cycling & walking projects, the cost-effective implementation of reduced traffic speeds could be one of the most effective tools we've got for significantly improving cycling & walking conditions.



The public don't want reduced speed limits

Support from retailers and residents is typically very strong. The Ponsonby Road retailers campaigned for reduced speeds. In Pt Chev, Auckland, a survey of residents revealed 86% support for reduced speeds.

Residents in Denmark and Netherlands often have window signs, wheelie bin stickers and posters on lamp posts in support of the reduced speed limits.

A Dutch residents' campaign in the 1980's: **"50 is too fast!"**



However, despite the wide base of support, there is risk that a vocal minority will initially oppose reduced traffic speeds, as they may see them as an infringement of their personal freedom, hence the following recommendation regarding implementation.

Implementation:

In order to facilitate the consultation process it is recommended that a thorough communications and community engagement exercise is carried out to inform all stakeholders of the wide ranging benefits that are likely to result. Particular stakeholders that may have a strong opinion (one way or the other) should be contacted directly and dialogue entered into.

In Northern Europe, social marketing programs have included education and promotion campaigns to encourage public support.

At a local Council level, the political support should be sought and secured before commencing the external communications and community consultation.

Summary:

Given the lack of funding and political mandate to improve conditions for pedestrians and cyclists through the provision of physical infrastructure, reduced traffic speeds have the potential to cost-effectively provide safe and pleasant conditions for walking and cycling.

Area-wide reduced traffic speeds need to be promoted to educate the wide range of stake holders of the many benefits and implemented in close co-operation with community, local politicians and stakeholder groups.

The end result will address what is often the number one reason for people not cycling: 'It's too dangerous'.

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