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VicRoads Speed Limit Review
60 Denmark Street
Kew, Vic, 3101

11 October 2011

Submission to the 2011 VicRoads Review of Speed Limits

Victoria Walks welcomes the opportunity to make a submission to 2011 VicRoads Review of Speed Limits.

On 16th September Victoria Walks received an invitation to make a submission to the review. Whereas Victoria Walks welcomes this invitation and the opportunity to make a submission to this important review, we are concerned greatly about the timelines.

The time between invitation (16 September) and the due date of submissions (11 October) is less than four weeks. This period also includes two weeks of school holidays. Victoria Walks believes the timelines are manifestly inadequate and limit the ability of many organisations and individuals to make a submission. Victoria Walks is extremely disappointed that VicRoads declined requests to extend the submission due date.

Many local governments have informed Victoria Walks that the timelines will not permit them to prepare and seek internal approval for making a submission. Similarly, many schools will be unable to make a submission on a subject that impacts greatly school communities.

For organisations, such as Victoria Walks, the quality of the prepared submission has been compromised by the relatively short notice and inflexible timelines. The timelines have also meant that Victoria Walks has been unable to adequately consult with and support the 17 Walkability Action Groups associated with the organisation to make their own submissions.



In the submission below, Victoria Walks makes the following recommendations:

1. Lower speed limits to 40 km/h on residential streets and 30 km/h in high volume pedestrian areas, such as the Melbourne CBD and busy shopping strips.
2. Speed limits and speed zones should recognise the vital role of streets as social spaces, and value the journey as much as the destination.
3. Speed Zones should be widened to facilitate walking journeys to local destinations, including streets surrounding strip shopping areas and other higher pedestrian routes.
4. Speed Zones be implemented in town centres, strip shopping areas and key local destinations across Victoria.
5. School Zones should be expanded beyond the vicinity of school gates to include the surrounding school catchment area, particularly nearby busy roads, to a distance of 2 km.
6. Speed Zones should be implemented on pedestrian routes to public transport destinations.
7. Minimise the number of speed limit changes by extending the length of 40 km/h zones and times – rationalising adjacent speed limits should not involve any increase in speed limits.
8. Speed zones should contain complementary traffic infrastructure and traffic calming devices.

In addition to recommendations addressing the Terms of Reference, Victoria Walks believes that the following are critical to effective speed limit policies and guidelines:

1. Align the Speed Zoning Guidelines to the Transport Integration Act 2010.
2. Ensure traffic safety should adopt a pedestrian centred approach.
3. Develop streamlined and transparent systems to facilitate the implementation of speed zones by local governments.
4. Align VLIMITS with the objectives of the Transport Integration Act 2010.

Yours sincerely



Dr Ben Rossiter
Executive Officer

1. About Victoria Walks

Victoria Walks is an independent walking for-transport health promotion body established, funded and supported by VicHealth. VicHealth's health promotion investments target the greatest preventable risk factors for ill health including lack of physical activity. VicHealth plays a significant role in supporting organisations to promote and encourage physical activity. An objective under its previous strategic plan was to establish a coordinated and integrated approach to promoting walking and cycling (*Lead, empower, support, connect: Victorian Health Promotion Foundation strategic priorities 2006–2009*). From this VicHealth developed Victoria Walks to coordinate and implement walking-for-transport initiatives at a state and community level.

The purpose of Victoria Walks is to operate as a charitable non-profit institution for the public benefit to promote the prevention or the control of diseases in human beings, in particular where they relate to physical inactivity by increasing the number of people who walk as a means of transport.

Victoria Walks promotes vibrant, supportive and strong neighbourhoods and communities where people can and do choose to walk wherever possible.

Victoria Walks:

- Provides leadership for walk-friendly environments through submissions, resource provision, influencing policy development, research, public comment, forums and social marketing.
- Provides resources and support to communities to promote walking and make their neighbourhoods more walk-friendly.
- Works to increase awareness of the health, environmental, social and economic benefits of walking, and undertakes walking promotions and events.

2. Background

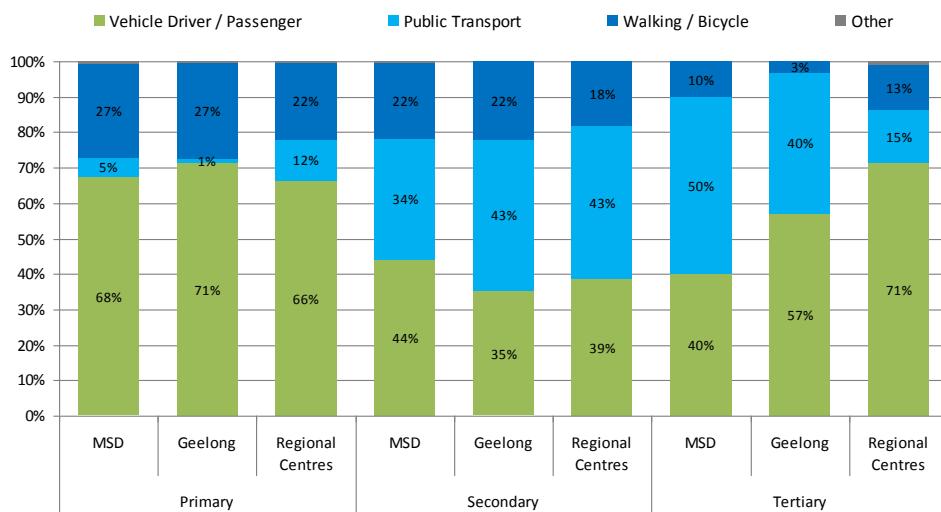
2.1 Decline in walking and its implications

There has been a dramatic decline in the level of walking to school, work and more generally (DOT 2010). Between 1971 and 2003, the percentage of Australian children aged 5-9 that walked to school dropped from 58% to 25% and children aged 10-14 decreased from 44% to 21% (van der Ploeg 2008). As indicated in Figure 1, more than two-thirds of primary students are driven to school. Journeys to school have the highest mode share of walking at around 25%, as most primary school children attend a local school (64% of children enrolled at a school less than 2 km from home). Despite this, around 68% of primary school children are driven to school.

Figure 1.

More than two-thirds of primary students are driven to school

Journeys to primary school have the highest mode share of walking at around 25%, as most primary school children attend a local school (64% of children enrolled at a school less than 2 kilometres from home). Despite this, around 68% of primary school children are driven to school



Journey to Education – Main Method of Travel (Source: VISTA 2009)

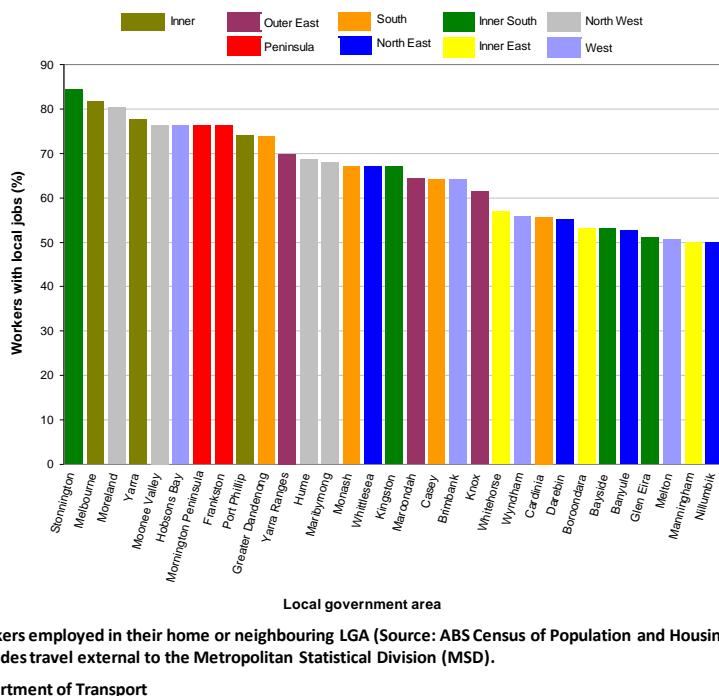
Department of Transport

Similarly, the level of people walking to work has dropped. In 1976, 9% of trips to work in Victoria were walked (ABS 1994), but by 2001 less than 4% were walked, improving marginally to 4.5% in 2006 (DOT 2010). This is despite the fact that large numbers of people work in the area they live (see Figure 2).

The decline in walking is extremely significant as physical inactivity and obesity levels have been rising at an alarming rate. Only 37% of Australian adults exercise sufficiently enough to obtain benefits to their health (AIHW 2010:92). Research indicates that 61% of adults are overweight or obese as are 25% of children aged 5–17. Type 2 diabetes (a preventable chronic disease) is expected to become Australia's leading cause of disease burden by 2023 (AIHW 2010).

In addition, the harmful effects of prolonged sedentary behaviour is now being recognised for its impact on workplace productivity. WorkHealth checks found that 73% of Victorian workers report inadequate physical activity (i.e. less than 30 minutes of moderate exercise per day) and 40% have a high or very high risk of developing type 2 diabetes or cardiovascular disease (WorkSafe 2010). Poor employee health and absenteeism is costing Australian business \$7 billion annually (Medibank 2005).

Figure 2.
Large numbers of people work in the area they live.



The total cost of obesity to the Australian economy is estimated to be \$37.7 billion, which includes direct health costs of \$1.5 billion, indirect costs (productivity related losses etc) of \$6.4 billion and burden of disease costs of \$30 billion (Medibank 2010).

There are numerous other costs to private car dominated travel. Congestion in Melbourne is projected to rise from \$1.2 billion in 2005 to \$3 billion by 2020 (BTRE 2007). The 'school run' has a significant impact on congestion –17% of Melbourne's morning peak car traffic consists of children driven to school (DOI 2005). The massive dependency on car based transport results in extremely high road trauma cost. In Victoria, the economic cost of road trauma is more than \$4 billion a year which does not include the emotional effects of road trauma on families and communities (TAC 2010).

2.2 Why promote walking?

Walking has substantial physical and mental health benefits and is the most prevalent moderate-intensity physical activity of adults (Armstrong 2000).

Building physical activity such as walking and cycling into everyday life is more cost-effective than structured exercise programs (Sevick et al, cited in Garrard 2009b). The many regular short trips most people take to get around in their communities provide ideal opportunities for accumulating the recommended three 10-minute periods of moderate to vigorous physical activity (Department of Health and Aged Care 1999, cited in Garrard 2009b).

The decline in walking to school represents a lost opportunity for children to achieve the one hour of physical activity required per day for good health. To put this in perspective, activities like walking to school burn more kilojoules than organised sport and other outside school hour activities. Studies

show that children who walk or cycle to school are more physically active and better cardiovascular fitness compared to children who do not actively travel to school (Davison, cited in Garrard 2009a).

In reviewing recent evidence relating to children's active travel, Garrard found that a: "mode shift from motorised transportation (principally being driven by car) to active transport improves children's health by:

- increasing levels of physical activity (and associated physical, psychological and social health benefits)
- helping children maintain healthy weight
- reducing injury due to motor vehicle crashes
- reducing the environmental health damage caused by excessive car use (eg air and noise pollution, global warming)
- reducing inequalities in children's health associated with physical activity, obesity, and motor vehicle crash injuries" (Garrard 2009a).

In research undertaken for the Department of Transport, SKM estimated that "the net health benefits from substituting 20% of short (≤ 1 km) car trip legs with walking and 20% of medium (1 – 5 km) car trip legs with cycling in Victoria would bring net health benefits of \$229m to \$619m per annum" (DOT 2011).

The more walking (and cycling) that occurs, the safer roads become for active travel. Research clearly shows "diminishing rates of fatal and serious injury with increasing levels of walking or cycling" (Austroads 2010).

2.3 Why speed matters to walkability

Traffic speeds that prioritise vehicular traffic tend to result in poor walking environments where streets are hostile and dangerous to pedestrians. This is a major barrier for walkability and consequently a significant impediment to increasing the number of people walking. For instance, VicHealth research found that 63 per cent of parents believe traffic volume and speed is a barrier to their children to walking to school.

Pedestrians (and cyclists) are more vulnerable to collision injuries. This is reflected in patterns of injury severity. Pedestrians (and cyclists) experience more severe injuries than motor vehicle occupants (Garrard 2008). Between 1997 and 2006, 7561 pedestrians and 3570 cyclists were killed or seriously injured on Victorian roads. This equates to nearly one in six (16.3%) of all persons killed or seriously injured being pedestrians or cyclists (Garrard 2008).

Walking accident rates in particular increased from 641 in 2005 to a peak of 823 in 2007. These rates decreased in 2009 and 2010 to 697 and 635 respectively (VicRoads Crash Stats). The number of serious injury and fatal pedestrian accidents reported to police between 2005 and 2010 ranged between 39 and 59 fatal accidents and 593 and 782 serious injury accidents (VicRoads Crash Stats).

The current year has seen extremely bad comparative outcomes for pedestrian safety in Victoria. Year to date Traffic Accident Commission (TAC) data to 22 September 2011 indicate pedestrian fatalities are the only growing category of road user deaths (and increase of 43% since 2010). The rate of growth in the comparative pedestrian death rate is unacceptable. Should this trend continue, the fatality rate of pedestrians will be almost equal to that of car passengers and almost half the rate of fatalities for car drivers.

An intensified harm minimisation approach centering on speed reduction is essential to curbing the high level of pedestrians in the road toll. A pedestrian hit by a car at 30 km/h has a less than 10% chance of dying, but this climbs to 50% at 44 km/h and 90% at 56 km/h (Garrard 2008).

Furthermore, research conducted by the University of London reveals that primary school children

cannot accurately judge the speed of vehicles travelling faster than 20 mph (32 kmh) (Royal Holloway 2011).

Research clearly demonstrates that lower traffic speeds result in a reduction of the frequency and severity of pedestrian collisions. Slower speed is a major factor in creating walkable environments. There is a clear association between neighbourhood walkability and the level of walking (Bentley 2010). In safe, attractive and vibrant communities, people are more likely to walk and be physically active and experience a better quality of life (WHO 2006). Reducing speed can also contribute to better air quality, more efficient energy use, smoother traffic flow and, overall, enhances the liveability and sustainability of cities (OECD 2011).

3. Changing the system

3.1 Align the Speed Zoning Guidelines to the Transport Integration Act 2010

The Transport Integration Act 2010 (TIA) establishes the overarching legislative policy framework for the transport system in Victoria. The TIA recognises that transport can affect broader social, environmental and economic outcomes. The policy framework in the TIA sets out objectives and decision-making principles that transport bodies must consider as part of their activities and decisions.

Key aspects of the framework relate to health and the built environment, including:

- Facilitating better access to, and greater mobility within, local communities [section 11(2)(d)]; and
- Promoting forms of transport and the use of forms of energy which have the greatest benefit for, and least negative impact on, health and wellbeing [section 13(c)].

It is well recognised that speed reduction is key to increasing sustainable transport modes. The National Road Safety Action Plan 2009 and 2010 states:

“speed reduction can result in reduced fuel consumption, emissions and noise. Low-speed shared road environments are conducive to walking and cycling – improving community cohesion, supporting community health objectives and reducing trauma, particularly for pedestrians (Australian Transport Council 2010).”

At present, policy, legislative and speed zone guideline application settings appear incorrectly calibrated. Below are some examples of the conflict between the Guidelines and the TIA.

1. The Speed Zoning Guidelines tends to be applied to manage traffic movement and traffic network solutions according to traffic throughput, rather than planning for place, amenity or civility which are important for walkability. The TIA provides for planning for places through addressing social and economic inclusion, economic prosperity, environmental sustainability, integration of transport and land use, efficiency coordination and reliability in that order. Although Speed Zoning Guidelines provide for safer speed limits in particular circumstances, the Guidelines fail to deliver an integrated approach.
2. In the context of variable speeds, the application of the Guidelines to reduce speed is most likely to be implemented during times of least inconvenience to vehicle traffic, rather than during times of highest pedestrian need (which often coincides with peak traffic movements). Conflicting and inconsistent application in a context that provides predominantly for one type of user (i.e. vehicular traffic) rather than another, tips the delicate balance required for safe passage in multi-modal environments, putting the most vulnerable road users, pedestrians and cyclists, at greater risk. Any application of variable speed settings in the Speed Zoning Guidelines that provides for faster moving traffic at the same time as increased pedestrian traffic would appear inconsistent with the objectives of the TIA. In some circumstances, the application of the Speed Zoning Guidelines to increase speed in peak hour traffic, increases

the risk profile for pedestrians as the most vulnerable road users. In such circumstances, more serious injury and potentially death, are both more likely, and reasonably foreseeable. The application of Speed Zoning Guidelines where it provides for increased traffic speeds beyond limits acknowledged as safe for pedestrians, at times of the day when pedestrian traffic is at its peak, and when modal conflict is at a premium, is possibly also inconsistent with the Road Safety Act, 1986, s.1 (a) 'to provide for safe, efficient and equitable road use.'

This is an opportune time to review, evaluate and revise the objectives and decision-making tests in the Speed Zoning Guidelines to be consistent with the TIA. Without an assessment of current applicability, capacity to deliver on the objectives of the TIA, and appropriateness of decision making guidelines, the application of Speed Zoning Guidelines and legislative intent of the TIA will always appear to conflict.

3.2 Traffic safety should adopt a pedestrian centred approach

A traffic safety approach that centres on casualty reduction rather than also focussing on creating pedestrian-friendly road environments and increasing the level of walking-for-transport is largely inconsistent with recent legislative changes and policy developments such as the TIA and the *Pedestrian Access Strategy* which aim to increase the level of active travel and the health and well being of the Victorian community. For example, the 'arrive alive' approach seems to be premised on a culture that subordinates pedestrian needs into a vehicle-dominant road network. 'arrive alive' describes Safe Systems as:

- Designing roadsides to reduce risks;
- Setting speed limit according to the road and road side;
- Advising, educating and encouraging road users to comply with road rules; and
- Encouraging safer vehicles.

The human body is vulnerable and unlikely to survive an uncushioned impact at a speed of more than 30km/h. A safe system of road travel should be based on an understanding that even relatively low speeds can kill or seriously injure unless the vehicle and the road and roadside environment take account of the physical vulnerability of all road users (*arrive alive* 2011).

At present, 'designing roadsides to reduce risks' is essentially mode separation to facilitate traffic flow and certainty in traffic speed. The Safe Systems Approach is skewed towards consistent driver speed and fails to prioritise pedestrian presence and safety. This also appears inconsistent with the Road Safety Act, 1986, s.1 (a) 'to provide for safe, efficient and equitable road use'.

Rather than reducing road danger by placing pedestrians at the heart of road safety, *arrive alive* approaches pedestrian issues by focussing mostly on encouraging 'safe walking practices', installing pedestrian fencing and 'facilities that separate pedestrians from motorised traffic' and reviewing 'penalties for illegal pedestrian behaviour'. A more pedestrian centred approach to road safety would be to reduce traffic speed and expand speed zones into wider areas than is presently the case.

Similarly, a road safety performance indicator of VicRoads is to reduce road trauma and the number of pedestrian fatalities. The indicator appears not to be linked to increasing the number of pedestrians and has quite possibly contributed to the decline in walking.

3.3 Streamlined and transparent systems to facilitate implementation by local governments

At present, the Speed Zoning Guidelines do not limit speed reduction zones to shopping centres and school locations (s.7.2.2 indicates 'these guidelines have been written to cover a wide variety of generic locations'), however in practice they appear to do so. The administrative requirements of extending the application of Speed Zoning Guidelines to areas beyond those indicated 'generally require the approval of the Executive Director, Road Safety and Network Access'. Anecdote from local government indicate that the additional administrative hurdle is both onerous and limits the

application of more comprehensive ‘speed zones’ across residential areas. This additional administrative burden inhibits and limits transparency in decision-making under the Guidelines.

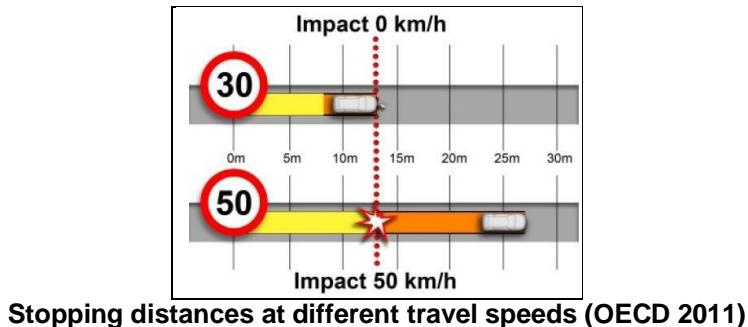
Furthermore, the current requirements of VLIMITS appear to be made in a narrow context that excludes many considerations required under the TIA. Although pedestrian injuries and deaths are capable of both being foreseen, predictable and fatal at the speed levels established in Speed Zone Guidelines, high levels of pedestrian deaths are but one consideration for speed reduction. VLIMITS is not predicated on pedestrian safety or any assessment of protecting pedestrians in circumstances of likely modal conflict. Rather, it is focused on moving vehicle traffic at the speed limit except in exceptional circumstances.

4. Recommendations

Promoting walking brings an overwhelmingly positive contribution to the challenges we face in transport, health, productivity and the environment. It is time to shift the modal share away from private vehicular transport in favour of more walking and public transport. Speed plays a significant role in this transformation.

The objective of speed limits should be to induce more people to walk more often. This review provides an important opportunity to rethink the Speed Zoning Guidelines, VLIMITs and other road rules and regulations from the perspective of enabling walking in and around neighbourhoods, town centres, schools and strip shopping areas.

Recommendation 1: Lower speed limits to 40 km/h on residential streets and 30 km/h in higher volume pedestrian areas, such as the Melbourne CBD and busy shopping strips



Despite Recommendation 1 above, there is a strong case for lowering speed limits further. The evidence linking lower speed limits to increased pedestrian safety is clear –30 km/h is the internationally recommended safe speed limit for areas where vulnerable road users are exposed to vehicular traffic (as defined by the biomechanical tolerance to crash impact forces) (WHO 2008).

The International Transport Forum at the OECD’s 2011 report recommends that:

In urban areas, 30 km/h zones should be incorporated in to the majority of streets, with only a few main roads remaining at a posted speed limit of 50 km/h. Moreover in areas where pedestrian activity is important and where it is necessary to give priority to pedestrians, a reduction of the speed limit to 20 km/hr or less should be considered.

Further,

“The implementation of 30 km/h zones in city centres and in all residential areas has proven to be highly effective. It is therefore crucial that this concept continues to be promoted so that communities can reap the benefits for pedestrians, the users of the urban public space and, more generally, the residents of cities.

The trend in various cities around Australia has been towards lowering speed limits from 50km/h to 40km/h. Brisbane, Sydney, Perth have implemented this change whilst Adelaide and Melbourne have indicated their support. Many regional and metropolitan councils have already reduced speed limits to 40km/h in shopping strips, town centres (e.g. Warrnambool and Warrigal), and some residential streets.

More recently, inner metropolitan councils - City of Yarra, Melbourne, Port Phillip and Stonnington are considering proposals to lowering the speed limit to 30km/h speed zones in residential streets.

Recommendation 2: Speed limits and speed zones should recognise the vital role of streets as social spaces, and value the journey as much as the destination.

Walking is as much about the journey as the destination. Comfortable, safe, contiguous and connected walking environments are important to cater for the walking patterns, habits and needs of different members of the community. Neighbourhood streets should respond to local pedestrian needs, maximising the safe use of the public realm.

It is important that speed limits and speed zones recognise and value streets as social spaces. Different people will use these spaces differently depending on their age and the purpose of their journey. Primary school children often walk, meander and cycle along pavements to and from school often exploring, learning about their neighbourhood and engaging in social interaction. Teenagers can use streets as places to express their growing independence, taking delight in bumping and leaping unexpectedly, falling over, and clowning around. Commuters may stride with purpose to meet departing trains, trams or buses. Older retirees often stroll and rest on benches and watch the world go by.

Recommendation 3: Speed Zones should be widened to facilitate walking journeys to local destinations, including streets surrounding strip shopping areas and other higher pedestrian routes.

Transport and urban planners frequently work on the assumption that people are prepared to walk 400m to a destination. The State Policy Planning Framework and all municipal Planning Schemes use a 400m walking 'ped shed' (the area encompassed by the walking distance from a town or neighbourhood centre) as a rule of thumb to plan comfortable walking distances.

However, people are not limited to walking 400m distances. For example, people will walk longer distances to shop depending on: the point at which they enter a shopping strip; the number of things they need to do before and after; what they might have to carry with them; and the friendliness, convenience, comfort and amenity of the journey. Where transport opportunity and local destinations are aligned, and where it is possible and comfortable to shop as part of the journey home, people are likely to do so. This increases the effective range of those accessing areas, supporting the viability of local neighbourhood centres and the vitality of life on the street (Gehl, 1971 and 2010, CABE, 2007). This is important for the economic, health and sustainability of communities as a range of studies have shown that people who walk (ride or arrive by public transport) to strip shopping areas go more frequently, stay longer and spend more money than those who drive (Victoria Walks 2011).

Speed Zones should include appropriate walking ped shed ranges. This can help to reduce pedestrian fatality rates, particularly for people over 70 years, and significantly increase the level of children walking to school. Furthermore, the greater the number of people walking on the streets, the more likely parental fear of 'stranger danger' will ease and result in more parents allowing their children to walk regularly to school, and around their neighbourhood.

Recommendation 4: Speed Zones be implemented in town centres, strip shopping areas and key local destinations across Victoria.

The Speed Zoning Guidelines currently provide direction for specific environments such as some shopping strips and the immediate entrance to schools rather than in the surrounding catchments.

To achieve comfortable, safe, contiguous and connected walking environments people need to be able to move around, into and from key local destinations including town centres, parks, public transport, high pedestrian areas, and community facilities, workplaces, between homes, schools and shops.

Pedestrian journeys across any distance require most people to cross roads on multiple occasions on each journey, and usually at many points into and out of an activity centre, shopping strip, school, the area of a community facility or higher volume pedestrian area (e.g. workplace). Thus the immediate vicinity of both schools and some strip shopping areas are not the only environments requiring lower speed limits.

It is important to note that speed zoning should facilitate walking no matter how small a shopping area or town centre is, or whether the entrance point to a school is directly abutting one road or the next, particularly where there is a need and desire to cross the road, and where traffic passes at speeds higher than those that are safe for pedestrians.

The application of Speed Zones currently encourages a narrow piecemeal and mono-modal assessment of speed and speed impact from a vehicle perspective. A consequence of this approach to the application of speed zones, including large numbers of speed zone changes, is an apparent uncertainty among drivers of the appropriate speed limit in any one place.

More consistent setting of lower speed limits over wider areas would reduce confusion and conflict points and are likely to only marginally, if at all, increase vehicle travel time. Research clearly demonstrates that lowering speed limits in built-up urban areas has a minimal impact on drivers' travel time (Fildes et al 2005).

Speed Zones need encompass local destinations. For example, the evidence is that older people are more likely to walk to a park rather than in a park (Sugiyama, et al 2008) and that people that maintain moderate physical activity throughout a life course are healthier, happier and generally live longer. Evidence also supports that those who are engaged in activities with others are happier, less socially isolated and less likely to require recourse to the mental health system for depression. Further, recent evidence indicates that walking the equivalent of 72 city blocks per week is protective against the onset and progression of dementia for up to at least 9 years (Erickson et al, 2010).

As an example, picture an older man on his way to his local lawn bowls club. If this older man cannot get to lawn bowls safely, easily and comfortably on foot then he will either drive, and in doing so reduce his daily physical activity and increase his level of car based travel, or stop attending and reduce both his physical activity and engagement in community. These consequences have long term health impacts on the individual and society in terms of the costs borne by the community, including his support care into the future.

For him, as for every other person in Victoria, the road rules support his right to cross a road more than 20m from a formal intersection so long as he is taking the most direct route. The chances are there are no signalled intersections on his way to the park in the course of his route, and he has had to cross multiple roads to get there. Speed limits should be supporting and making his walking trip safer.

In circumstances where the comparative rate of pedestrian fatality or serious injury is increasing and where older people are consistently more heavily represented in the pedestrian fatality rates, local

neighbourhood street speeds should be reduced to protect these most vulnerable road users. Such a strategy would be consistent with both harm minimization approaches to the road toll and the TIA.

Recommendation 5: School Zones should be expanded beyond the vicinity of school gates to include the surrounding school catchment area, particularly nearby busy roads, to a distance of 2 km.

Speed limits should facilitate walking to school, strip shopping areas, town centres and other local destinations. Currently, the area covered by a School Zone is simply determined by whether the entrance point to a school is directly abutting one road or the next. As a result, School Zones tend to result in making car drop off points safer rather than promote active travel to school. School Zones thus seem to support car based travel rather than active travel.

The benefits of walking to school cannot and should not be underestimated. For children and adults, walking is the most accessible form of physical activity that has range of individual social, mental and physical health benefits. These factors, along with the significant economic and environmental benefits to the whole community, highlight the need for the road environment, including speed limits, to actively encourage and enable walking-for-transport.

Currently many School Zones extend on the road of the main school gate for a distance of not more than 250 meters. This is inadequate firstly because, in Victoria the median trip distance for young people walking or cycling to school is 1 km (DOT 2009). Secondly, it does not take into account the fact that many schools have other gates leading on to main roads are not covered by School Zones.

Recommendation 6: Speed Zones should be implemented on pedestrian routes to public transport destinations.

Bernick and Cervero (1996) found that people will walk more than 800m when the destination is public transport, particularly a train station. Walking to public transport also increases the level of incidental physical activity of commuters. Department of Health (2011) data from 2009 indicates the more proximate more people are to public transport, the more likely they will achieve their minimum daily physical activity levels and the better their health outcomes. Walking to public transport appears to have beneficial outcomes for the health of communities most generally, and particularly women and children (Boyce, 2011). Speed zones should facilitate walking to public transport.

Recent work undertaken by the Department of Transport to developing the Principal Pedestrian Network Methodology to identify key pedestrian routes (and supportive infrastructure changes) into and around activity centres possibly provides a framework for assessing and considering the implementation and expansions of Speed Zones and general speed reduction in higher volume pedestrian areas.

Recommendation 7: Minimise the number of speed limit changes by extending the length of 40 km/h zones and times – rationalising adjacent speed limits should not involve any increase in speed limits.

At present, the Speed Zoning Guidelines require signage at every point of entry into and exit from a low speed designated area. Further traffic threshold treatments are required to slow car speed at every point of entry to an area. As a result, streets are often littered with frequent and multiple speed change signs and signs warning drivers of approaching traffic treatments. This contributes to confusion, unnecessary road side clutter and causes motorists to constantly take their eyes from the road environment on which they should be concentrating. Each additional sign potentially lowers the impact of signs and adds to cumulative signage fatigue and frustration by motorists. Motorists are in an environment where signage governs their driving behaviour ahead of consideration of the local street environment, eye contact and interaction with other road users.

Aside from creating a less walkable environment for pedestrians, these multiple requirements can result in substantial costs to local authorities who in turn need ongoing funding over multiple budgets to manage speed over small geographical areas.

One way to minimise the number of speed limit changes is to extend the length of 40km/h zones and times in applicable areas. The benefits of lower speed limits over a greater area include reducing other mode conflicts and reducing serious injuries and fatalities, especially to more vulnerable road users such as pedestrians and cyclists.

Such a strategy would be consistent with both harm minimization approaches to road trauma and the objectives of the TIA.

Recommendation 8: Speed zones should contain complementary traffic infrastructure and traffic calming devices.

Different circumstances require different remedies. For instance, some roads would benefit from increased pedestrian amenity including signalised lights, longer crossing times, increased number of crossing points as well as reduced road speeds. Others might benefit from curb outstands, straightening and narrowing splayed road corners, and reinstalling corners which have been taken to provide for additional road amenity.

Given that people are lawfully entitled to cross most roads so long as they cross directly, and not within 20 metres of a formal crossing point, the act of crossing should be made as safe and comfortable as possible for all pedestrians. Speed reduction through traffic calming is key to ensuring this occurs.

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