



Appendix A: Safe-street Neighbourhoods

October 2016

Introduction

Purpose and scope

This submission presents the case for *Safe-street Neighbourhoods* being included as an element of the 'Community Strategic Plans' for the Randwick, Waverley and Woollahra council areas. This case strongly supports strategies, policies and funding for cycling and walking and specific measures that provide for active transport. Our Eastern Suburbs community wants local streets to be made safer, friendlier and more attractive for all families, children, persons with mobility difficulties and neighbours.

The submission is made by BIKEast - the bicycle user group (BUG) representing people riding bicycles in the Eastern Suburbs of Sydney. BIKEast is affiliated with Bicycle NSW.

The focus is for changing neighbourhood streets in ways that slows traffic and complements cycling networks under local bike plans and strategies. It is an urban design-based approach to foster redesign of streets, help tame the behaviour of motorists and riders and make local streets safe for everyone to use and enjoy and will also be good for local businesses and service providers.

Aim & objectives

- Make neighbourhood streets safe for all to use and enjoy.
- Design or re-design local neighbourhood streets to:
 - make all vulnerable users safe by introducing 30km/h speed zoning
 - primarily serve residential needs while maintaining essential vehicular access
 - further improve amenity through adaptations that serve people's use and enjoyment
 - make every street a cycle street¹ for a connected neighbourhood and city.

The case for Safe-street Neighbourhoods

Safety Considerations

Safety considerations are the main deterrent to cycling. Many people perceive the streets and on-road bike facilities in Sydney as too dangerous or risky to use². This may be readily addressed for neighbourhood streets by lowering speed limits and using traffic-calming measures to gain compliance, with street-space re-assigned and re-landscaped over the longer-term.

On-street parking arrangements also need to be addressed reassigning space for public use, broadening benefits, particularly where housing densities are increased.

¹ Theme from 'Woollahra Bicycle Strategy 2009' ... promoting and facilitating cycling on all local roads

² Taverner Research, Research Report: Active Transport Social Research. City of Sydney, April 2015, (Project Ref: 4940).



Active Transport Social Research (Tavener). Survey for City of Sydney – key findings
(Quotes from Themes Emerging from Research, page 9, emphasis added):

Safety considerations are the main deterrents to cycling with separate cycleway and dedicated lanes being the measures that would encourage the most non-regular cyclists to cycle.

Over half of over 50 year olds were non-cyclists including 71% of females over 50 years old. Additionally only 24% of non-regular cyclists in that age group were interested in cycling more ... The same safety measures that would encourage under 50 year olds to cycle more would also encourage over 50 years olds."

Both anecdotal experience and surveys, from Australia and overseas, show that when attractive low-speed neighbourhood streets are coupled with measures such as separated cycleways and shared paths along roads with more traffic, people who would otherwise be deterred from riding their bikes will be encouraged to ride more often. Wider and better footpaths, walking and rider facilities and pedestrianised streets giving pedestrians top priority, are measures that would encourage more walking and bike riding and would lead to other uses being made of our neighbourhood streets.

Many programs have been introduced that demonstrate success justifying changes to neighbourhood streets to gain safety and high amenity.

Local surveys show that prevailing safety concerns and attitudes that cause people to drive rather than ride means that current targets set in NSW for ride-to-work (commuting) will not be achievable. That is unless people who can and sometimes ride are led to feel comfortable and safe enough to leave their home on a bike and reach cycleways that get them to where they want to go. That is, taking up riding a bike regularly.

Parents also need to gain confidence that it is safe to allow their children to ride to school and sports, and avoid driving them, which currently adds significantly to traffic congestion at morning peak times.



On Sunday 9th September 2012, 69 volunteers, 69 bicycles, 60 cars and one bus gathered in Canberra to recreate a world-renowned photograph highlighting road space requirements by travel mode.



Traffic congestion also prevails due to active travel options being underutilised and underfunded. Additionally, road pricing (congestion charging) would help as an incentive for people to consider active travel, if coupled with a reduction of the risks for people riding bikes.

Reduce Motoring Danger

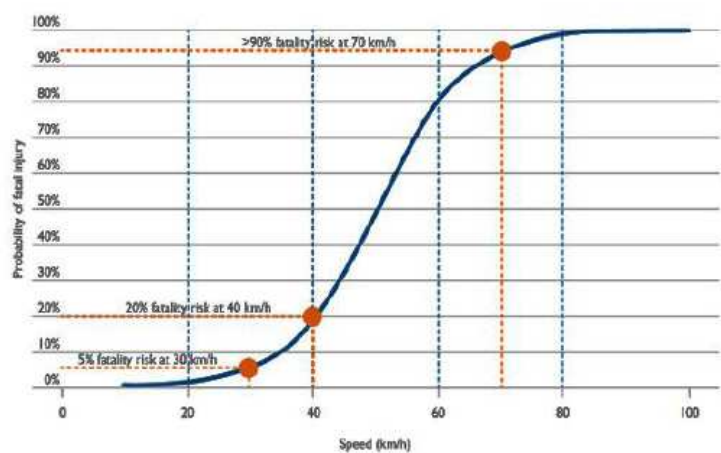
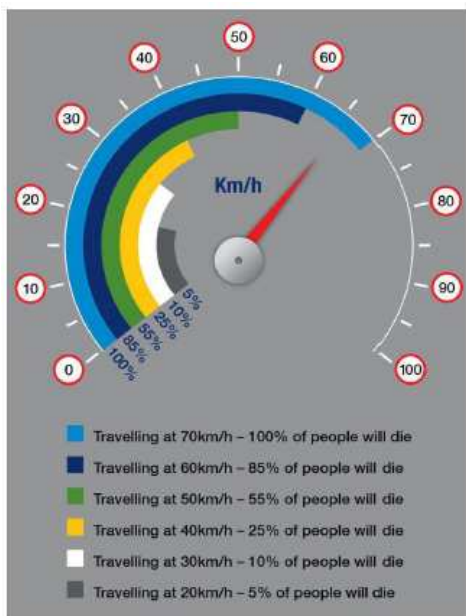
Motoring danger needs to be reduced to protect vulnerable users of our streets – pedestrians and people riding bikes. How? Slow the traffic and redesign streets in ways to ensure reasonable compliance with the speed limit and minimise through traffic.

Most neighbourhood streets pose a range of harmful risks. This is not just a perception, but is the case under 50km/h speed zoning and even at 40km/h traffic speeds.

Infrequent riders find it too risky to reach safe shared paths or cycleways. In many cases such paths or cycleways are disconnected at major intersections, as well.

Currently, to avoid risks of harm, many riders drive to parks or near to where they want to ride, carrying their bikes. This requires more time commitment and deters many that may otherwise ride more often.

Statistics show that for 40km/h the risk of fatalities is still about 10% for accidents between a motor vehicle and a pedestrian or bicycle, while for 30km/h it is well below 5%. It is now less than 2% in Denmark, Holland and Switzerland, where 30km/h speed limits apply in residential neighbourhoods and through village centres as well, after introduction over the past 40 years.



Source: Austroads 2012, On road Cycling on Higher Speed Roads.

On road Cycling on Higher Speed Roads³ for risk of fatalities for a range of speeds.

When governments introduced 50km/h and 40km/h speed limits there was significant opposition to these lower speeds, but these limits are now widely accepted. It has saved lives and pain, as fatality and injury statistics over the last two decades show.

³ Austroads, On road Cycling on Higher Speed Roads, 2012.



Inquiry into Aspects of Road Safety in Australia⁴:

“When such limits were introduced in 1992 across the entire city of Graz, Austria, the majority of residents were not in support of them:

“When the discussion around speed reduction started in 1992, the approval for lower speeds was around 44%, but by 1995 this had nearly doubled to 82%”.

In Graz, public support rapidly grew to a level where even the majority of motorists were supportive of the lower speed limits – 2/3 of car drivers were supportive of the lower speed limits in 1994, compared with 1/3 in 1992 when the limits were introduced. In terms of road safety, Graz project resulted in a 12% reduction of accidents with injury, 24% reduction in serious injury, 17% reduction in pedestrian injury and a 14% reduction in injury to car users. Despite only a 4% reduction in cyclist injuries, 83% of cyclists strongly supported the reduced speed limit. General acceptance soon became so high that in July 1994, the scheme was made permanent.”

In Europe and the USA, 30km/h or 20mph (32km/h) respectively, are now the standards. A 30km/h standard should be adopted here within neighbourhoods and their small centres; the road safety benefits and other benefits, such as access to transit, local services and facilities and to amenity, are significant.

Perceptions matter

Driving everywhere is an established attitude that locks-in behaviour posing an additional hurdle to residents' choice of transport. This is despite the health and other benefits of walking and riding that are increasingly recognised by the public.

What drives us to drive, walk or cycle to work in Albury⁵

“Some of the neighbourhood, suburb, and city related factors that support AT [Active transport] to work include short distances from home to work, off-road and well maintained paths, adequate and safe traffic crossings, lower traffic volumes and traffic calming devices and ‘pleasant’ routes. Aesthetically pleasing neighbourhoods and streets, mountable curbs, roads with fewer lanes of traffic and subsequent smaller street widths and presence and proximity of bus stops and railway stations to homes also enable AT.”

In Sydney's inner suburbs, where congestion occurs but access to public transport is relatively good, there is a basis to incentivise active forms of travel. Moreover, with light rail and other improvements in public transport under way, the State government's expectations are to further increase housing densities. This is where initiatives to encourage the take up of bike riding may need special focus on making commuting and travel to schools, and for recreation, much more attractive. Consequently, there may be less resistance to the lowering of speed limits than in outer areas and is one of the beneficial trade-offs.

Local streets need to appear, feel and be safe and comfortable to use and enjoy by everyone.

This makes for cycle-friendly neighbourhoods and will help change public perceptions about risks and lowering speeds.

There are a number of good examples of street design with appropriate traffic management incorporating landscaping. Safe-street Neighbourhoods with slow traffic are proven to work and improve amenity.

⁴ Van den Dool (2015) – Quotes from letter to the Inquiry, page 5.

⁵ Pearson, page 6



Stewart & Alexander Streets, Paddington:
landscaped kerb extensions and ramps



William Street, Paddington: Footpath widening and landscaped kerb blister



Bourke Street, Surry Hills: Separated cycleway along a neighbourhood street



Bourke Street Public School: Father & son join cycleway for ride home

Travel time, benefits and costs

Motorists' door to door travel-times increase by only seconds, not even minutes, for the average car trip to work, school, shops, parks etc., if 30km/h speed zones are introduced.

The map on the next page, shows a typical (notional) 30km/h neighbourhood network and distributor / collector streets, while the Table 1 lists a typical commuter car trip from home – North Maroubra to Chatswood – being the chosen trip (purple line shown on the Map).

Costs depend on a great number of variables and in this case only the standard cost of the additional travel time that transport engineers and economist use, are applied.




Map of

Maroubra (North): 'Low Speed Environments – why most cities have them'⁶

Distributor/collector streets take up 20% of the total length of roads within this defined neighbourhood; 80% with, notionally, having 30km/h speed zoning!

Table 1: Extra travel time – 30 km/h neighbourhood street

Trip segments	Distance (km)	Time 50km/h (minutes)	Time 30km/h (minutes)	Difference	Difference (seconds)
Home to main road	0.5	0.6	1.0	0.4min.,	24
Main road	13.0	24.8	24.8	0.0min	0
Main road to work place	0.5	0.6	1.0	0.4min	24
Total distance	14.0				
Total times		26.0	26.8	0.8min	48
Average speed		32km/h	31km/h	-1.0km/h	
Travel cost calculation					
Value of travel time				\$11.89/hr	
Total cost/person/month				\$3.17/month	 = 1 cuppa/month

See Table 2 for the calculated benefits of the lower speed, based on the Map above, if applied NSW-wide.

Inquiry into Aspects of Road Safety in Australia (Van den Dool & Tranter, 2015)
“Based on the Dutch experience, the road safety benefits of widespread introduction of 30km/h in urban residential streets can be readily established. Table 2 shows a worked example for 50km/h streets in NSW, with the potential to reduce the total of 10,076 crashes by some 3,241 crashes with a community benefit of \$886 million.”

The majority of the above indicative benefits are due to reduction of fatalities and injuries. There is a very high potential monetary saving for the community, as well as avoiding suffering and personal losses.

⁶ Van den Dool (2015) - Quotes from letter to the Inquiry, page 7



Table 2: The small price of 48 seconds

	Number of crashes in NSW	Crash reduction	Savings in crashes at 80% conversion	Cost per crash	Savings in crash costs at 80% conversion
Fatalities	29	10%	2	\$5,582,000	\$13million
Injuries	4,389	60%	2,107	\$410,000	\$864million
Property damage only	5,658	25%	1,132	\$8,150	\$9million
Total	10,076		3,242		\$886million

However, there are many other benefits not normally calculated when roads based measures are introduced.

'The Value of Cycling': Personal benefits⁷

- *Neighbourhoods with cycle-friendly characteristics – low traffic volumes, walkable, close to off-road cycle paths – are more desirable or have higher property values*
- *Residential property values rise 1% if motor traffic is reduced by 50%*
- *Children who walk or cycle to school tend to be more attentive and achieve better results*
- *Cycle friendly environments promote more physical activity in later years⁸*



Hopetoun Street, Paddington: Pedestrian crossing platform & landscaped seating area



Windsor Street, Paddington: Closed street with community garden and seating

Once 30km/h limits are implemented in local streets people will not really notice any loss of time.

Inquiry into Aspects of Road Safety in Australia: The Speed Paradox⁸

"Reducing speed limits 30 km/h in residential streets will not lead to a loss of time. Indeed, it may even lead to a reduction in time pressure. Garrard explains:

"Evidence from studies in several countries indicates that the main (publicly articulated) reasons for opposing reduced speed limits in urban areas; namely, increased travel time and costs, are substantially overstated. Small travel time benefits associated with higher speed limits (an average of 9 seconds/km in one study) come at substantial cost in terms of the health and wellbeing of individuals and communities". In Bristol, signs-only 20 mph pilots resulted in increased walking and cycling, reduced road speeds, and no impact on journey times or bus reliability."

⁷ Rajé & Saffrey. Quote from 'Headline Findings', page 3

⁸ Quotes, 27/02/2015 letter to the Inquiry, page 8



Social & environmental benefits

Some of the key such benefits are qualitative and diverse:

1. Social interaction⁹

“People living in areas with low volumes of motorised traffic experience much higher levels of interaction and friendliness with their neighbours. Children have more local playmates when traffic speeds and volumes are lower. A lack of social connection is now being recognised as a key determinant of poor health (both mental and physical).”

2. Fuel savings

“30 km/h zones lead to less fuel use and greenhouse gas emissions, and reduced air and noise pollution.”

“German 30km/h zones led to car drivers changing gear 12% less often, braking 14% less often and using 12% less fuel”.

3. Noise and exhaust fumes

“Compared to 50 km/h, 30 km/h reduces traffic noise by 3 decibels. This supports greater social connection as people can converse more easily, as well as sleep more easily.”

Traffic adversely impacts neighbourhood street environments, as well.

4. Underutilised street space

Excessive spatial requirements for cars on our neighbourhood streets displaces other forms of access or economic and recreational activities. They also takes away room for landscaping and making space for places people could otherwise use.

5. Car-sharing and automated vehicles

In urban areas, car-sharing is now an increasingly available service. The evidence is that this form of car use is increasing and that commercially provided car-share vehicles save up to 7 parking spaces for every car-pod set aside within a neighbourhood street. It enables people to gain access to cars that are close, but saves households from having to own a second or third car. While not saving much street space, it may lead people to consider alternatives to the car for short trips, once convinced that walking and cycling are safe and convenient.

Another prospect is that fully driverless cars will eventually come onto the market. It is best to make neighbourhoods safe by introducing 30 km/h speed limits well beforehand so that GPS and other electronic controls for operation of these vehicles are put in place. The public would be very concerned about allowing these vehicles if speeds are not kept very low in their neighbourhood.

The environmental and other factors mentioned add to the case for lower speeds, for diverting traffic with no business in the street, and thus lead to street re-designs that encourage active transport and making for better use of the road reserve.

⁹ 'Ibid' (page 7)



The way forward

The case presented is to aid convincing the community and you, our Councillors, of the benefits of introducing 30km/h speed limits along neighbourhood streets. It helps gain understanding that:

1. the only way to entice more people to choose to ride a bike is to minimise, if not eliminate, the incident of crashes between motorists and riders; and
2. people want assurance that they can comfortably ride from their door to their destination within the neighbourhood or reach a cycling network that gets them safely to their destination, beyond.

The first step is to introduce 30km/h speed zoning for neighbourhood streets and street designs that slow motor traffic while still permitting vehicular movements (e.g. service vehicles) that are appropriate in a residential setting. The second step is to apply urban design, landscaping and traffic management best-practice that has a focus on high residential amenity with safety being a fundamental aspect of amenity.

40km/h zones were introduced in some Inner Sydney areas. These will need to be reviewed. For instance, in Paddington, prior to the opening of the Cross City Tunnel, 40km/h speed zoning was introduced. However, due to poor compliance with the new speed limit (well below the 85% compliance target) various other measures needed to be taken additional to roundabouts and street closures, including narrowing of traffic lanes, adding angle-parking, blisters, landscaping, thresholds and even some footpath widening (Paddington Society, 2004).

To gain compliance with 30km/h speed in parts of Paddington, trafficable lane widths may need to be reduced from 3.8m to 3.3m. For example this may require the extension of existing blisters by 0.5metres (see below). In many situations, no further work is necessary to gain compliance.



Elizabeth Street, Paddington,
between Oxford and Caledonia Streets

Other measures can be undertaken to implement 30km/h speed zoning, including cheap interim ones. For example (see illustrations below):

- Paint can be applied and supported by temporary features, such as portable planter-boxes until comprehensive redesign and permanent traffic management measures and appropriate landscaping can be undertaken. Or..
- Where high pedestrian traffic demand justifies (for instance at local shops) a 10km/h Pedestrian Priority zone, with high safety benefits, can also be introduced within neighbourhoods (although the current warrants set by the RMS may also have to be reviewed to permit this to happen).



Queen Elizabeth Drive, Bondi Beach in front of the Bondi Campbell Parade entry



Queen Elizabeth Drive, Bondi Beach, near the Pavilion (Pedestrian Priority area)

Auditing and mapping neighbourhood streets

An audit and mapping of the local streets suitable for inclusion as low-speed neighbourhood streets must be undertaken. These documents must also identify streets in the local bike and pedestrian plan, and routes on high traffic streets, where separated paths or cycleways are in place or proposed. Such facilities may be part of a regional network and need not preclude the introduction of 30km/h zones. But this lower speed zoning may provide an alternative to having to provide more costly bicycling facilities along such neighbourhood streets.

A key element is to establish a 'local-road hierarchy' where most residents will have access within 500m from a higher speed road. e.g. a Main or State Road.

Regulatory framework and opportunities

A range of Federal, State, and Local Government policy frameworks and other guides are applicable.

Under the *Local Government Act 1993 No 30, Amendment (Planning Reporting) Act 2009 No 67* governs the preparation and application of Community Strategic Plans, Delivery Programs and Operational Plans.

The *Roads Act 1993, NSW Road Management Arrangements 2008*, provides three categories of roads: State, Regional and Local. For local roads, a council may initiate changes to the default 50kph speed zoning. This is by proposing lower speed limits (i.e. 40km/h) and pedestrian priority areas (i.e. 10km/h), subject to adequate justification, street re-designs, Local Traffic Committee(s) endorsements and final RMS approvals.

RMS has guidelines and warrants that define and limit a councils scope for change. Local roads must ensure compliance with the rules and be designed to minimise policing of, for example, speed limits. Currently the guidelines do not give full scope to widely apply the proposed 30kp/h zoning. This will require the NSW Government to direct a change to give the council the necessary discretion.



One overarching platform justifying the Safe-street Neighbourhoods initiative is the *National Charter on Land Use and Transport* (adopted by Australian and State Ministers of Transport and Ministers of Planning in 2003), which states (inter alia) that local areas should:

- be created as precincts where provision for vehicle traffic is subservient to the needs for quality and amenity;
- provide route continuity through local streets for pedestrians, cyclists and public transport and promote urban design and street layouts that encourage the use of these modes; and
- preserve, enhance and encourage local scale and accessible development and develop local functional road/environment categories and networks which reflect the relationship between different transport functions.

While a somewhat dated commitment, the National Charter nevertheless makes clear the obligations and priorities to be given by governments for streets within residential neighbourhoods. Additional opportunities for change present themselves when a new strategic plan needs to be prepared, or local land use plans are updated by the local council.

The Local Area Traffic Management Plans (LATM) applied over the past decade have provided for some considerable road safety and amenity improvements. However, their focus has generally been too narrowly based and mostly retained 50km/h speed limits. If LATMs are fully integrated under an urban design based approach, with longer-term street re-design, landscaping and 30km/h speed controls introduced, the aims and objectives of Safe-street Neighbourhoods can be achieved.

The above approach is also relevant to future updates of State and Regional level plans, such as the Greater Sydney Commission's Central District Plan, currently being prepared. Council should make up-front submissions to ensure that Plan provides for Safe-street Neighbourhoods.

Conclusion

This submission provides the aims and objectives of creating safer local streets, and details the case for implementing the Safe-street Neighbourhoods approach in Sydney's eastern suburbs.

In submitting this information our purpose is to convince and provided guidance for councillors and community leaders to take immediate steps to lower speeds in our neighbourhood streets to 30km/h. We also hope the case presented will help alter prevailing perceptions, or miss-perceptions, about the effects of driving, the hazards of the current 50km/h and 40km/h standards.

Councils have a responsibility to address concerns about the safety and amenity of local streets - recognising the needs of people who walk or ride bicycles for local trips. This submission provides a clear case that motor vehicle traffic and speed are the main factors limiting the use of bicycles as a form active transport for all people capable and willing to make that choice.

Priority must therefore be given to policies and infrastructure for walking, use of personal mobility vehicles, bicycle use and amenity, over traffic and parking, within neighbourhoods.



Recommendations

The recommendations to the Council are to:

1. Include in its next or updated **Community Strategy Plans...**
Clear aims, objectives and policies for implementing the Safe-street Neighbourhoods
2. Include in its next or updated **Delivery Programs and Operational Plans...**
Provisions and specific priorities, actions and funding for the planning, development and implementation of Safe-street Neighbourhoods, including for the introduction of 30km/h speed zones and 10km/h Pedestrian Priority zones for neighbourhood centres
3. Make a submission to the Greater Sydney Commission supporting inclusion in the proposed **Central District Plan...**
Provisions that give priority to safety and amenity matters over traffic within residential neighbourhoods, consistent with the National Charter on Land Use and Transport (as adopted by Australian and State Ministers of Transport and Ministers of Planning in 2003)
4. Provide BIKEast with an opportunity to present the proposed case and recommendations well prior to the finalisation of the above mentioned strategies and plans, please.

Prepared by:



Adrian Boss

Representative BNSW-BUGs Council, BIKEast

Signed on behalf of BIKEast:



Mark Worthington

President, BIKEast

Acknowledgements

Special thanks for advice and inputs from Dick Van Den Dool and Sara Stace.

This submission is based on the Safe-street Neighbourhoods model case endorsed by the Bicycle New South Wales (BNSW) Council in July 2016. The model was presented to the BNSW NSW Bike Riders Conference held at Newcastle 12- 14 August 2016 and generally welcomed and supported by attendees.

The BNSW Board subsequently adopted the model at its October 2016 meeting and included it as part of its **Advocacy Essentials – How to make Cycling + Walking a priority in your NSW local Council** package. This is a tool for local Bicycle User Groups, such as BIKEast, to make a case for a council to include cycling and related policies in their Community Strategic Plans. <https://bicyclensw.org.au/advocacy/advocacy-essentials/>



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