



NZ Road Safety Strategy 2010 - Submission of the Cycling Advocates Network of NZ

Introduction

The Cycling Advocates Network of NZ (CAN) is pleased to have the opportunity to comment on the draft NZ Road Safety Strategy 2010. Road safety is of significant concern to the people CAN represents: New Zealanders who use the bicycle as a means of transport.

People who currently cycle in New Zealand face significant safety problems on the country's roads. These derive from the behaviour of other road users and of the cyclists themselves, and from other aspects of the roading environment such as roading design and vehicle design.

There are also many people who have given up cycling in New Zealand, and people who would like to take cycling up but are deterred from doing so. For these people, a perception that New Zealand's roads are unsafe for cycling is a major factor in their decision to stop cycling or not to take it up.

CAN looks forward to a roading system which freely allows people to choose to bike or walk, a roading system that provides a good level of safety for all road users. CAN's vision is: "Cycling is an everyday activity in Aotearoa/New Zealand".

We hoped to see this vision reflected in the draft NZ Road Safety Strategy 2010 and were encouraged by the Strategy's aim of bringing NZ's road safety performance in 2010 up to current world's best practice. Many other countries have significantly better provision for cyclists than New Zealand and achieving world's best practice in cycle safety will see major improvements here. This will require a very substantial increase in effort and resources.

CAN welcomes the fact that the draft Strategy mentions cyclists often, and that it recognises that cyclists and other 'vulnerable' road users have particular needs. However, we do not see that this is supported by interventions that will make a real difference to cyclists' safety. CAN believes that the draft Strategy in its present form will lead to little improvement over the current situation - a disproportionately low level of attention and resources allocated to making a safer road environment for cyclists. In our view, the Strategy has fundamental flaws that will require substantial revision.

CAN recognises, however, that in developing the draft Strategy, the National Road Safety Committee has not been able to factor in the broader changes in transport policy that the Government is currently working on. These changes (e.g. moves to reduce car

dependency) are likely to both contribute to and be influenced by the road safety goals and initiatives in the draft NZ Road Safety Strategy 2010.

CAN believes that the Government should ensure that initiatives such as the New Zealand Transport Strategy, other transport reforms, and the Energy Efficiency and Conservation Strategy, help to achieve road safety goals.

Equally, CAN believes that the NZ Road Safety Strategy 2010 must avoid pre-empting these other Government initiatives. Either the final form of the Strategy should be decided at the same time as the other reforms are concluded, or it should remain a living document that can be amended during its ten year term.

The Energy Efficiency and Conservation Act and ratification of the Kyoto Protocol are likely to lead to major changes in the transport sector. Reduced emissions and reduced fuel and energy use will require policies that encourage more sustainable means of transport, including cycling.

Road safety policy has a critical role in the encouragement of cycling. While it is not the only determinant of whether or not people take up or continue cycling, danger in the road environment (including fear of crashes, motorists' attitudes and driving habits and the road standard and layout) is a significant deterrent^{1,2}.

Government policies have already resulted in new efforts to promote alternatives to private motor vehicle use. As more people get on their bikes, road safety policy must help to ensure that the right measures are put in place to prevent a comparable increase in cyclist deaths and injuries.

- **Cyclists' Right of Access**

Perceived and actual lack of safety in the current roading environment is compromising cyclists' basic right of access to much of the roading network. As well as being an issue of equity, this has created the 'Catch 22' situation where resources to improve the roading environment are allocated on basis of existing crash data but a cycle-unfriendly environment has contributed to a drop in cycling numbers³ (and hence a drop in cycle crashes and a reduced likelihood of improvements being made). The NZRSS 2010 does not address this problem - it will effectively maintain the status quo as far as cyclists are concerned. This is the most fundamental flaw of the draft Strategy from CAN's perspective.

CAN believes that if people are to no longer be put off cycling, road safety resources should be allocated on the basis of creating a safe roading environment rather than on the basis of an established crash record.

¹ Davies, DG, Halliday, ME, Mayes, M & Pocock, RL *Attitudes to cycling: a qualitative study and conceptual framework* Transport Research Laboratory, Crowthorne, UK, 1997

² Snelson, A & Lawson, S *Cycling Motorists: How to encourage them* AA Public Policy, Basingstoke, UK, 1993

³ *Travel Survey Report 1997-1998* Land Transport Safety Authority, Wellington, 2000 shows that the number of cycle trips has declined by 26% between 1989/90 and 1997/98.

- **Vision & Safety Culture**

The vision of the current *National Road Safety Plan 1995* is "To achieve a level of safety on our roads equivalent to the safest countries in the world, driven by a firmly established safety culture". Safety culture "will be evident where high-risk behaviour, including drink driving and speeding, is socially unacceptable as a result of greater community awareness and education, peer group pressure and widespread implementation of measures aimed at deterring offenders"⁴. We note that the vision in the current strategy is really a goal.

CAN believes it is important that the Strategy has a vision. Currently it does not have one. Even though achieving current world's best practice would represent a major advance for cyclists (arguably greater progress than for most other road user groups), CAN wishes to see a more ambitious and morally justifiable vision. ***CAN wishes to see New Zealand adopt the Swedish "Vision Zero" approach, where our vision is a future society in which no-one is killed or seriously injured in road traffic.***

We may never reach this vision, but it does make it clear that any death or lifelong suffering from road crashes is unacceptable. Merely aiming for "current world's best practice" implies we do accept them.

Emulating world's best practice should be a means to work towards achieving the vision. Safety culture is another important means to that end. Unless developing a better safety culture is explicitly mentioned as one of the Strategy's goals, the elements that make up safety culture are underemphasised, particularly education.

The draft Strategy also does not attempt to define safety. Much time was spent during the National Land Transport Strategy process coming up with such a definition. This work should be revisited, and ***the draft Strategy should clarify what is meant by safety.***

CAN's view of safety is that every road user takes responsibility for avoiding crashes, and therefore mode choice is not influenced by perception of risk.

- **Three Option Concept**

CAN believes that the three option idea in the draft Strategy is flawed as it directs submitters more than is desirable. The inclusion of a 90km/hr open road speed in the enforcement option is likely to ensure this option will not be widely supported. The reduction in the open road speed limit has also been less well justified than the engineering option. ***CAN supports most elements of the enforcement option and would like to see as many as possible of them implemented, even if the 90 km/h open road speed limit has to be dropped.***

The engineering option is supported with non-safety arguments such as time savings and comfort (p.4), while obvious non-safety arguments for speed reduction (reduced fuel consumption/greenhouse gas emissions) are omitted. These additional arguments for speed reduction need to be included when comparing options.

⁴ *National Road Safety Plan 1995* Land Transport Safety Authority, Wellington, 1994

The draft Strategy emphasises the benefits of the engineering option (e.g. p.20) but does not consider its disbenefits. For example, safer vehicles may result in more risk taking (e.g. ABS may cause people to brake later). Reduced travel times imply higher average speeds, which may result in less safety for some road users (e.g. cyclists). 'Speed creep' is not just a function of vehicle design, as suggested on p.34, but also of the roading layout. **CAN wishes to see the full range of benefits and disbenefits of each options considered.**

CAN is aware that safety improvements for cyclists will require a considerable investment in infrastructure (as well as education and enforcement) but we are reluctant to support the engineering option when it is so unclear what level of investment will go into cycling.

Page 81 ("Assumptions") makes it clear that "At the institutional level we assume that the current system for funding the road network will remain in place, and that road investment projects will continue to be of the same general type and mix as now". This suggests to us that cycling projects currently have a low priority in the Strategy. This disappoints us and **we are keen to see a "project mix" included that gives greater emphasis to cycle safety.**

- **Role of Education**

One of the biggest problems with the three options proposed is that education is understated. It is assumed to be underlying all options. This doesn't help people address the implications of different levels and types of education approaches. Instead, only engineering and enforcement are considered in detail and it is implied that the way we educate road users is adequate. CAN questions this assumption. **CAN believes education should be made an obvious and central part of the Strategy.**

There are many new opportunities for education that could be taken up. An example from the cyclist perspective would be "Share the Road" campaigns to legitimise cyclists as road users in the eyes of the driving public. There is also considerable room for improvement in the availability and delivery of current education resources and programmes, such as the need to rationalise overlapping cycle training resources and ensure nationwide availability of cycle training.

We understand that our concerns about the role of education in the draft Strategy are shared by many other submitters. **We suggest that a further round of consultation on the Strategy is required to give people the opportunity to look again at the balance of education with engineering and enforcement.**

In Table 1 (p.23) for example, the intervention "Education" is simply tagged as "Included in other interventions". Arguably, before any of these we need to get some institutional/systematic changes in place, e.g. funding systems, crash data quality. The draft strategy appears to have already gone a fair way past these questions, without letting us question the assumptions made.

Referring to Box 37 ("Key constituencies & how we reach them" p.72), **CAN would like to see the following changes:**

- **the Road Code needs revision to reinforce the bicycle's status as a vehicle**
- **cycling skills are important for cyclists' safety⁵, and as the most widely available cycling skills course for children, Kiwi Cycling should be recognised in the Strategy**
- **cycling courses for adults should be developed and made available in as many parts of New Zealand as possible**
- **defensive driving courses need to include cyclist issues**
- **training for road safety and transport professionals needs to treat cycling as a mainstream transport mode, with adequate consideration of cyclist issues.**

Regarding "Educating drivers & other road users" (p.73), we query the statement "The key to road safety is to make drivers and other road users (particularly vulnerable users such as cyclists) both risk-averse and informed". This puts undue emphasis on people avoiding risk imposed by others, giving insufficient weight to road users avoiding imposing risk on others.

Motor vehicles impose most of the risk on the roads. Many people who've tried cycling or would like to take it up are deterred by perceived or actual risks imposed by motor vehicles. Many of those who do cycle are adept at avoiding risk, often adopting illegal tactics in the interests of their own safety (see Wood, 2000)⁶. The statement on p.73 should be amended to read "The key to road safety is to make road users (particularly those who impose the greatest risk) risk-averse and informed"

CAN believes there is an important role for road user education right across New Zealand society. We note that education (together with enforcement) has achieved a fundamental change in New Zealanders' attitudes to drink driving. We believe the same effort is required to reinforce the link between road deaths/injuries and excessive speed, and to encourage motorists and 'vulnerable' road users to share the road safely and considerately.

A detailed analysis of cycle safety, including discussion on risk compensation and on the balance between education and engineering measures for cycling is contained in McClintock (1992)⁷.

- **Selection of Interventions**

The criteria for selecting road safety interventions are listed as funding cost, compliance burden and implementation effort (p.7). Interventions should also be able to be selected for the degree to which they contribute to other Government goals (e.g. for health, environment, economic sustainability).

⁵ Hughes, T. & Cummins, M. *The Role of Road Safety in Cycle Promotion* in The Proceedings of the NZ Cycling Symposium 2000, EECA, Wellington, 2000

⁶ Wood, K. *Cyclists and the Law* in the Proceedings of the NZ Cycling Symposium 2000, EECA, Wellington, 2000

⁷ McClintock, H. *The Bicycle and City Traffic* Belhaven Press, London, UK, 1992 (available from Massey University library, PN)

NZRSS 2010 processes are not objective and independent of political considerations. Politics does and should come into the picture, and this should be acknowledged in the Strategy. To deny this is to deny the Government opportunities to use the Strategy to achieve other aims. For example, it is the current Government's policy to reduce dependence on motor vehicle use, yet the NZRSS 2010 in its present form will do little to encourage alternatives like cycling and walking.

As stated in the introduction to this submission, CAN believes that the Road Safety Strategy 2010 should be open to amendment within its ten year term to enable it to support other Government objectives.

- **Outcome Targets**

Table 4 (p.30) sets out targets for 2010. **CAN believes it is unacceptable to set targets for fatalities.** Such targets are not used in maritime and air safety and should not be used in road safety. **CAN believes the long term goal should be for no road fatalities** (see comments on "Vision Zero", above).

We are pleased to note the inclusion of a cycling target that does not relate to helmet wearing! There are three main concerns for cyclists about the proposed target, however. Firstly **we do not believe that "hospital admissions" is a reasonable user-group target to use.** Hospital admissions could fall as a result of fewer people cycling or walking, for example. This does not constitute improved safety for those still cycling. Road controlling authorities could achieve this outcome target by allowing the roading environment for cyclists to continue to deteriorate so that cyclists give up riding.

We wish to see a target measure adopted for cycling that is expressed as a rate, preferably as crashes per hours cycled. This is a better measure of exposure for cyclists than crashes per km cycled or crashes per 10 000 cyclists as it recognises that a cyclist generally takes longer to cover a given distance than a motor vehicle. For cyclists (and pedestrians) it has been noted that crash risk is broadly proportional to the duration of exposure to risk⁸. To enable proper risk comparisons to be made, rates for other modes should also be expressed as crashes per hours travelled.

Secondly, **general targets should not be given in both absolute numbers and rates per various units.** If exposure rates change the targets will become meaningless as it may not become possible to achieve them all.

Thirdly, it has been shown that more cycling means proportionately lower risk for each cyclist⁹. **Because more cycling brings more safety for each cyclist, a target for increased cycling should be included.**

This runs contrary to the belief held by many transport and road safety professionals that increased levels of cycling will lead to more crashes. This belief may have created

⁸ Department of Transport *Memorandum Submitted to the Transport Select Committee*, Her Majesty's Stationery Office, London, UK, 1991, pp.45-60

⁹ Wood, K. *Bicycle Crashes in NZ* Wellington, 1999

a self-fulfilling situation. "The fewer cyclists on the streets, the less drivers seem prepared to co-exist and to anticipate cyclists' needs."¹⁰

In fact, it appears that as cyclist numbers go up, cycle crashes do go up, but at a slower rate. Active promotion of cycling and walking reduces danger at source and accustoms motorists to experiencing other modes. This may help explain why countries with high cyclist numbers, such as the Netherlands and Denmark, have much better cycle safety records than countries like the UK and New Zealand, despite their apparently 'unsafe' cycling practices (e.g. reflective material and cycle helmets are rarely used, passengers sit on the back of bicycles and large numbers of children are carried).

Where vulnerable road users are properly catered for, encouraging cycling and walking will not lead to proportional increases in injuries and fatalities. In York (UK), for example, the policy of prioritising health promoting forms of transport, while restraining motor vehicle traffic has led to casualty reductions well above the national average¹¹. Further examples are given in *Costing the Benefits of Cycling*¹².

There is therefore a safety benefit from encouraging more people to cycle. CAN believes there should be a target for increased cycling included in the Strategy. We note that the UK road safety strategy requires local authorities "to develop local transport plans which include measures to increase cycling and walking, with a range of measures to improve safety"¹³.

The task of reconciling encouragement of cycling with achieving reductions in cyclist casualties is made more difficult in New Zealand by the separation of responsibility for road safety from other aspects of transport at a national level. **CAN believes there would be real benefits from reintegrating road safety with other transport policy making**, though we recognise this is outside the terms of reference of this submission process.

- **Exposure & risk** (p.65)

CAN wishes to see the Strategy make explicit whether increased safety for one road user group may be promoted at the expense of another. If risk transfer or other such safety trade-offs are to be permitted, these should be clearly stated.

In a study of nine intersections where safety improvements were made to benefit pedestrians, motorists and bus passengers, Wood¹⁴ found that six intersections were made less safe for cyclists, several of them substantially so. Opportunities to simultaneously improve safety for cyclists were missed.

We believe the Strategy should make it clear that safety improvements targeting one road user group should not make conditions less safe for another group.

¹⁰ Mathew, D. *More Bikes - Policy into Best Practice* Cyclists' Touring Club, Godalming, UK, 1996; p.14

¹¹ *Road transport and health* British Medical Association, London, 1997

¹² Shayler, M., Fergusson M. & Rowell, A. *Costing the Benefits: The value of cycling* Cyclists' Touring Club, Godalming, UK, 1993

¹³ *Tomorrow's Roads - Safer for Everyone* p.74

¹⁴ Wood, K. *Bicycle Crashes in NZ* Wellington, 1999

This will require agencies such as road controlling authorities, consultants and Transfund to be familiar with the requirements of all road users. Currently there is an overall lack of knowledge in road controlling authorities about how to cater adequately for cyclists.

Several things are needed to ensure these agencies are familiar with all road users' needs: **road design standards must be used that promote safety for all road users; audits of projects for new and existing roads should adequately consider the needs of all road users; and people with responsibility for ensuring the safety of road users must have adequate training and skills.** The Strategy should incorporate these aims.

Child cyclists (p.66) - The improvement in child cyclist fatalities and injuries may be due in part to fewer children cycling. The changes that have taken place in school journeys and the ways the Strategy could address the problems this has caused are discussed below under "School Trips".

- **Major urban roads** (pp.50-51)

The draft Strategy talks about using "roundabouts of consistent and cycle-friendly design". Cyclists are generally poorly catered for at roundabouts in New Zealand¹⁵. Roundabouts are fundamentally difficult for many cyclists, particularly on major urban roads. They can act as a deterrent to cycling as they are perceived as being very unsafe. Major roundabouts are not and will never be cycle-friendly. **CAN wishes to see roundabouts used more sparingly and is keen to contribute to any guidelines for roundabouts.**

The draft Strategy should include providing cycle-friendly designs for traffic signals. It mentions providing new/improved cycle lanes, but should also recognise that a minimum road shoulder width and surface needs to be a basic requirement for all major urban roads.

The Strategy also needs to consider situations where it may be appropriate to provide separate parallel facilities (e.g. segregated cycle paths) and address problems in crossing major urban roads, e.g. grade separation, mid-block signals.

The draft Strategy recognises that even a small reduction in motor vehicle speed can change a pedestrian death to an injury or near miss - the same applies to cyclists. However, if any reduction in speed is helpful, the 'lesson' of this is surely not that "vehicles should be kept away from pedestrians unless the vehicles are made to go very slowly". **If reduction in traffic speeds on major urban roads cannot generally be achieved through traffic calming** (p.51), **then appropriate speed limits should be set and enforced to maximise safety for all road users.** Furthermore, **road users should be educated to travel at a speed appropriate to the conditions,** which may be less than the speed limit.

¹⁵ Appleton, I. & Clark G. *The Ins and Outs of Roundabouts - Safety Auditors' Perspective* Transfund, Wellington, NZ, 2000

We are unhappy with the statement on p.53 that "on major roads it is normally best to separate pedestrians and cyclists from vehicles, and to permit vehicles to travel as fast as is consistent with the safety of their occupants". Apart from the fact that a bicycle is a vehicle, and that motor vehicle drivers should be concerned about the safety of other road users (not just the occupants of their own vehicle), the word "normally" is too sweeping.

What is needed is a set of criteria (that consider motor vehicle volumes and speeds) to assist in determining whether segregated cycling facilities are appropriate. The Dutch cycling manual *Sign up for the bike*¹⁶ and the UK National Cycle Network guidelines¹⁷ contain examples of such criteria.

Under current legislation, cyclists do not have right of way at the intersection of segregated cycle paths with side streets, unlike in Europe. By interrupting the flow of travel, this policy makes segregated paths unsuitable for many cyclists. Cycle commuters, sports cyclists etc. would generally prefer to use the carriageway, creating a disincentive for road controlling authorities to instal segregated cycle facilities. ***Cyclists on separate cycle tracks need to have priority when crossing side roads before greater segregation of motor vehicles and cyclists can become a realistic proposition.***

Under "Safety engineering response - Pedestrians and cyclists" the third bullet point needs to be changed to ***"Provide new, and improve existing, cycle lanes or adequate road shoulders" to ensure urban State Highways have some provision for cyclists.***

The draft recommends provision of pedestrian guard rails at selected busy locations (p.50). These are a potential hazard for cyclists, especially if they are close to the kerb. Guard rails need to be carefully designed and placed.

- **Minor urban roads** (pp.52-53)
CAN wishes to see methods to discourage through traffic (i.e. reduce volumes) discussed in the Strategy.

There are many benefits from Local Area Traffic Management schemes (mentioned on p.53) and CAN would like to see those stated in the Strategy.

Many minor urban roads are the streets that should be safe to cycle or walk along, but it is currently difficult to see them as different from major urban roads (e.g. same cross-sections, same speed limits, no impediment to travel along them). ***CAN believes the Strategy should seek to achieve a better match between a road's use and function, physical design, and speed limit.***

Safety engineering response - Intersection crashes (p.52): Many cycle crashes are located at intersections, but roundabouts are not cycle-friendly solutions to intersection

¹⁶ *Sign Up for the Bike - Design Manual for Cycle Friendly Infrastructure*, Centre for Research & Contract Standardization in Civil & Traffic Engineering, The Netherlands, 1993

¹⁷ *The National Cycle Network - Guidelines and Practical Details - Issue 2*, Sustrans, Bristol, UK, 1997

problems, and their use on minor urban roads should be minimised, especially as cycle underpasses will often be impractical on such roads. Other **cycle-friendly intersection treatments such as cycle phases in traffic signals and advance waiting boxes should be included** in this section.

Safety engineering response - Pedestrians and cyclists (p.52): Cycle lanes should not only be provided where space permits and demand warrants. **Cycle lanes should also be provided if conditions require them** (see comments above) **or if they are needed to create a place where people are encouraged to cycle**. Cycle lanes are often difficult to retro-fit to existing urban roads unless on-street parking is removed. In our view, the phrase "where space permits" does not assist in the process of finding a balance between the competing demands of cyclist safety and motorist amenity.

In Box 21 "Cyclists" (p.52) crash prevention appears to largely revolve around providing off-road cycle facilities. The problems with this approach have already been discussed above.

Educating motorists to "watch out for cyclists" is mentioned in Box 21. This slogan is well-intentioned, but motorists need to know what to do when they see one! **Education needs to go far wider than "watch out for cyclists" to ensure motorists understand cyclists' needs and know how to accommodate them.**

CAN welcomes the suggestion (Box 21) that enforcing urban speed limits will make cycling safer. Reducing speed limits (e.g. to 30km/h) is also important, however - this is recognised in Box 22 (p.53) but should also be included in any discussion on cycle safety.

Adult and child cycling skills/safety training and motor vehicle design contribute to crash prevention and cyclist protection and should be included in any discussion of cyclists. We note that the implementation timetable in the UK road safety strategy requires the British government to work with their largest cycling advocacy group to develop adult cycle training courses over the first two to three years of the strategy (p.74).

CAN is concerned that mandatory cycle helmet wearing has come to dominate the (very limited) activities of road safety professionals in relation to cyclists, to the exclusion of other, more important, safety issues such as motorist behaviour and a cycle-friendly roading environment. While an increase in cycle helmet wearing appears to have resulted in a reduction in cyclist head injuries, there is evidence that the mandatory helmet wearing law has caused a drop in cyclist numbers. CAN is concerned that any benefits from reduced head injuries may be outweighed by disbenefits from reduced exercise and by risk compensation. **We wish to see a full review of the impact of the mandatory cycle helmet wearing law.**

- **State highways & Minor open roads** (pp.54-57)

The overview of the draft Strategy mentions cyclists only in the context of the urban environment. The implication that cycling is an urban pastime or transport mode only is reinforced by lack of mention of cyclists in the discussion of State Highways and minor open roads. **State highways and minor open roads are used by cycle**

commuters, cycle tourists, recreational cyclists (including cyclists accessing off-road areas) and sports cyclists.

The rural road environment is often hostile to cycling already. Increasing traffic volumes and hard shoulders disappearing from State Highway sections when passing lanes get installed only worsens the situation.

CAN would like to see an additional set of recommendations for cyclists and pedestrians, including:

- **Adopt Austroads Part 14 - Bicycles (1999), with appropriate NZ adaptations**
- **Provide road shoulders of adequate width and surface for cycling**
- **Provide segregated cycle facilities where conditions warrant it**
- **Adopt prioritised programme of replacing narrow bridges or adding separate pedestrian and cycle facilities on each side of narrow bridges.**
- **Prevent driving on hard shoulders on left hand and vertical curves where visibility is poor.**

On State Highways and Minor Open Roads, head-on collisions and overtaking account for 20% and 15% of crashes, respectively. Given that this is a serious problem, **CAN wishes to see yellow no-overtaking lines maked on horizontal curves as well as vertical curves.**

- **The vehicle (p.61)**

CAN welcomes the acknowledgement in the draft Strategy of the safety benefits of reducing car use but wishes to see more work done on costing this. We believe there needs to be more explicit recognition in the Strategy that motor vehicles are dangerous and more attention given to the impact of motor vehicles on pedestrians, cyclists and motorcyclists. Conversely, cycling and walking should be encouraged because they impose few risks on other road users.

CAN would like to see new cars assessed for the degree of protection they provide for people other than the car occupants.

Although vehicle noise and emissions may be tackled outside of the Strategy, **CAN wishes to see vehicle noise and emissions being acknowledged as road safety issues in the Strategy.** These are mentioned under "Safer Vehicles" in the current *National Road Safety Plan 1995* (p.9). We note that research indicates that cyclists and pedestrians absorb lower levels of pollutants from traffic fumes than any other road users¹⁸

Under "Policy direction" (p.62), the draft Strategy says "We will continue the policy of adopting the leading overseas vehicle safety standards". After our experiences with the Glazing Rule we are sceptical about this. The yellow draft of the Glazing Rule noted that all the main international standards for automotive glazing limit the visible light transmittance (VLT) of the front side windows to not less than 70%, and "any changes to the Glazing Rule's current VLT limits would be in conflict with that

¹⁸ Rowell, A. & Fergusson, M. *Bikes not fumes - The emission and health benefits of a modal shift from motor vehicles to cycling* Cyclists' Touring Club, Godalming, UK, 1991

standard." The decision to lower the VLT to match some states in Australia does not seem to us to be following 'world's best practice'. We hope that this does not indicate how world's best practice will be interpreted under the Strategy.

- **School trips**

The draft Strategy recognises that more and more children are being taken to school by car, while the number of children walking and cycling to school has decreased. It suggests that busy roads are one reason for parents' concern for their children's safety, but by driving their children to school parents are paradoxically exacerbating the problem for others (p.12).

The draft Strategy does not suggest interventions, however. Nor does it acknowledge that the risks ensuing from obesity due to poor exercise habits probably outweigh any safety benefit from transferring children from a more risky mode to a less risky one. These elements are explicitly addressed in the new UK road safety strategy¹⁹.

CAN believes the Strategy needs targets for increases in the proportion of children cycling and walking to school in order to capture the health benefits of active forms of transport and to reduce the risks imposed by school trips made by car. By reducing the proportion of school trips made by car through development of child-friendly environments, these targets will reduce crashes involving children and motor vehicles. Measures to improve safety for child cyclists and pedestrians will have benefits for other road users and will contribute to Government health goals.

It will probably be argued that this is a road safety strategy and not the right place to consider health issues or mode choice. CAN thinks that if these issues are ignored in the Strategy, crucial opportunities to influence them and to provide links to other Government goals will have been lost.

The Safe Routes to School (SRTS) programme is an ideal way to address problems associated with school trips and **SRTS should be explicitly promoted in the Strategy with a target for the proportion of schools with SRTS schemes in place.**

While the NZRSS remains focused on reducing crashes rather than improving the roading environment, many schools will not qualify for funding for SRTS schemes. Particularly in cities, children do not appear in the crash statistics, not because of a safe road environment, but because their parents or teachers won't let them bike or walk in the first place. Setting targets for SRTS programmes would counter that.

Research undertaken by Christchurch City Council as part of their SRTS programme indicates that concern about road safety was the key reason for parents taking children to school by car in the four schools studied²⁰. While two thirds of children prefer active modes of travel, less than half travel to school this way. Cycling to school

¹⁹ *Tomorrow's Roads - Safer For Everyone* Department of the Environment, Transport and the Regions, London, UK, 2000; p.17

²⁰ see <http://www.ccc.govt.nz/saferoutes>

is the most preferred means of getting to school (37%), yet only 9.5% of children currently use bikes for the school journey.

In addition to SRTS, ***the Strategy should encourage schools to develop school travel plans***, as promoted in the UK road safety strategy²¹ (p.18). This could be initiated through the Ministry of Education.

- **Health issues**

'Health' and 'Safety' are often mentioned together, recognising that the two are inextricably linked in many ways. It's puzzling therefore that health issues are not considered to be part of road safety and are neglected in the draft Strategy. Even if health issues are considered "non-safety", if it's OK to admit non-safety grounds to justify engineering options (e.g. time savings, comfort and reduced operating costs, on p.20), then it should be OK to consider health issues.

There is currently a contradiction between the messages about cycling that come from road safety and health agencies. Road safety agencies accentuate the danger, health agencies the benefits. The public deserves to be presented with information on cycling that properly balances its risks and benefits.

Work by Mayer Hillman in the UK in the early 1990s^{22,23} estimated that the 'years added' through regular cycling outweigh 'years lost' through any increased crash risk by 20:1. This ratio reflected the road situations as they then currently existed and could be further improved if more action was taken to reduce the danger to which cyclists were exposed (rather than simply reducing crashes or injuries). As Mayer Hillman himself has pointed out, even if he has overestimated the benefits by a factor of 2, a ratio of 10:1 is still a compelling reason to support cycling.

In a report by Beca Carter Hollings and Ferner Ltd to Transfund NZ²⁴, general health benefits due to cycling have for the first time been quantified for New Zealand and are being recommended for inclusion in the Project Evaluation Manual.

Road safety agencies have a crucial role to play if NZ is to capture the health benefits of cycling, given that perceived or actual danger in the roading environment is a key deterrent to more people taking up cycling. Links between road safety and health service professionals need to be strengthened. These issues need to be addressed in the Strategy.

The draft Strategy ignores wider health issues and makes funding dependent on crashes rather than a desire to improve the roading environment. It will do little to encourage cycling. This should be reversed by setting targets for increasing the number of people cycling.

- **Speed**

²¹ *Tomorrow's Roads - Safer For Everyone*

²² *Cycling Towards Health & Safety*, British Medical Association, 1992

²³ Hillman, M. Cycling and the Promotion of Health, *Policy Studies* 1993, 14:49-58

²⁴ *Development of Procedures for the Evaluation of Cyclist Facilities*, Transfund NZ, Wellington, NZ, 1999

CAN supports the need to reduce speed limits as it will have benefits for cyclists. We are concerned, however, that the proposal to reduce the open road speed limit to 90km/h in the enforcement option is not sufficiently supported with evidence. If non-safety arguments can be used to justify the engineering option, then **non-safety arguments should be used to support a lowering of open road speed** (e.g. reduced energy use).

CAN wishes to draw attention to the fact that road controlling authorities seem to gazette the open road speed where 100km/h is clearly unreasonable. If a 90km/h open road speed limit is going to be unacceptable to the majority of New Zealanders, it may be politically more realistic to lower the speed limit on stretches of road where the average motorist does understand that the current 100km/h speed limit is too high. **CAN believes there will be additional safety benefits from lowering speed limits for roads where the current speed limits are too high.** These will allow the targets in the draft Strategy to be met more easily.

The draft Strategy states that where traffic signals cannot be eliminated in 100 km/h zones, they should be signposted with hazard signs (page 54). **CAN wishes to see the maximum legal speed limit at traffic signals set at 70 km/h for safety reasons**, as happens in Germany.

The negative impact of speed in urban areas is underemphasised in the Strategy and **CAN wishes to see a lower target for average urban speeds than 51km/h.** Urban speed limits below 50 km/h are little explored - this is of major concern to cyclists. Local Area Traffic Management schemes are mentioned on p.53, but it is not made clear what the benefits of lower speed zones (30/40 km/h) are. Evidence from German cities, for example, suggests that vehicle speed reduction in the form of neighbourhood or even city-wide traffic calming is critical in improving people's perception of safety²⁵.

The TRL Report 215 *Review of traffic calming schemes in 20 mph zones*²⁶, for example, demonstrated reductions in child pedestrian and child cyclist crashes of 70 and 48 percent respectively in the six traffic calming schemes studied. The reduction in crashes for all cyclists was 29 percent. Speed data showed that traffic calming measures were effective in physically enforcing the 20 mph (ca. 35km/h) speed limit.

As well as reducing deaths and injuries, traffic calming schemes can provide a roading environment that encourages cycling (and walking), provided traffic calming measures are of a cycle friendly design. **The Strategy should set targets for proportions of traffic calmed streets, as well as reduced rates of injuries.**

- **Lack of cycling data**

The draft Strategy describes cycle crashes in terms of absolute numbers only. CAN does not see how ongoing comparison of cyclist risk with that of other road users can be made when basic cycling data is lacking. **Cycle outcomes should be expressed**

²⁵ cited in *More Bikes - Policy Into Best Practice*

²⁶ Webster, D.C. & Mackie, A.M. *Review of traffic calming schemes in 20 mph zones*, Transport Research Laboratory, Crowthorne, UK, 1996

in terms of a rate rather than absolute numbers. The strategy needs to explicitly address the lack of cycling data (i.e. identify the gaps and commit to filling them). We note that the UK road safety strategy does this (p.70 & p.74).

The use of crash rates is critical: this is the personal perspective that anyone looking to get on a bike sees (i.e. what is my chance of having a crash depending on how much I cycle?). To do this, more accurate crash and exposure data are needed. CAN wishes to see road controlling authorities (including Transit NZ) collecting regular cycle use statistics. The New Zealand Travel Survey is a very useful source of information on travel habits. CAN wishes to see the NZ Travel Survey repeated every five years to enable more regular tracking of cycling trends. This will allow it to be tied in with census information too.

Page 13 makes the comment that "Risk is down across the board", showing the reductions by age. However, on looking at the NZ Travel Survey data comparing 1989 and 1997 trips, cycling stands out for having had virtually no change in crash risk over that time, compared with every other trip type. This shows that many of our current road safety interventions are working, but not for everybody.

It is hard for cyclists to have much faith in a road safety strategy that is based so heavily on number crunching when cycle crash reporting is so poor (see Wood, 1999²⁷) and data on cycle usage is collected so infrequently (the situation for pedestrians is even worse). **The higher under-reporting rate for cyclists (than for motor vehicle drivers) should be factored in.** It is unclear whether this has been done in the draft Strategy (Box 17 "Statistical reliability").

- **Safety Management System** (pp.75-77)
CAN supports the concept of a road safety management system, and the introduction of standards of practice and an audit system that apply to all roading controlling authorities. However, the proposed safety management system could easily lead to perverse result of 'safety = less cycling'. If the target is to reduce the absolute number of cycle crashes, then road controlling authorities might be tempted to achieve this by reducing the number of people cycling.

The Strategy needs to require road controlling authorities to include a target for increasing cycling in their Safety Management Systems to ensure that inaction does not lead to a deterioration of the roading environment for cyclists, leading in turn to a further decline in cycling numbers. This approach has been adopted by the UK road safety strategy²⁸. As outlined earlier in our submission, more cycling will bring increased safety (reduced risk) for individual cyclists.

We wish to see the "standards of practice for traffic management and road engineering" (p.76) include a set of cycle facilities standards, Austroads 14 (1999)²⁹. CAN believes that *Austroads 14* requires amendments for use in NZ.

²⁷ Wood, K. *Bicycle Crashes in NZ* Wellington, 1999

²⁸ The implementation timetable says "Local authorities to develop local transport plans which include measures to increase cycling and walking with a range of measures to improve safety" (p.74).

²⁹ *Guide to Traffic Engineering Practice Part 14 - Bicycles* Austroads, Sydney, Australia, 1999

However, the danger of adopting a separate set of cycling standards is that these standards are likely to be applied only when a road controlling authority (or their consultant) makes a decision to make special provision for cyclists, not during normal roading work.

The Safety Management System needs to set clear expectations that cyclists' needs will be considered in all roading work. The "system of regular audits" (p.76) must make sure this is done. This will require the "independent, qualified examiner" to have the necessary experience and expertise. Traffic engineers and roading designers currently lack basic skills when it comes to designing for cyclists, and formal training courses for new and existing staff are required.

These ***regular audits should incorporate cycle audit and cycle review procedures*** as contained in a recent IHT publication³⁰ and recommended for adoption in New Zealand by Francis and Cambridge³¹.

Sensitivity to the needs of cyclists and knowledge of how to provide for them is currently lacking in most road controlling authorities in New Zealand. ***The draft Strategy and the Safety Management System must make sure that "appropriate staff expertise and procedures" (p.76) includes training in cyclist issues. This will require the Strategy to allocate sufficient funds for training of new and existing staff.***

The Safety Management System is overwhelmingly focussed on roading measures as the means to increase safety. However, in 1996 road factors contributed to only 15.5 percent of fatal road crashes and 9.1 percent of injury-causing crashes (Better Transport Better Roads, p.24).

Better engineering certainly has a part to play in improving safety, and ***we wish to see mandatory national engineering standards put in place.*** However, other factors (driver behaviour and vehicle condition) are obviously very significant. Under the draft Strategy, road controlling authorities will also need to continue to use education and enforcement to improve road safety. ***The Safety Management system should audit road controlling authorities performance in engineering, education and enforcement.***

- **Driver training & licensing**

CAN would like to see a performance assessment system for entities that train and test drivers (p.77) included in the Strategy. Driver training and testing currently does not include cyclist issues. Combined with deficiencies in the Road Code, this starts drivers off from a position of ignorance on how to behave around cyclists. ***Cyclist issues need to be included in driver training (including defensive***

³⁰ Davies, D. & Sharpe M. *Guidelines for Cycle Audit and Cycle Review* Institution of Highways & Transportation, London, UK, 1998

³¹ Cambridge, S.M. & Francis A.J. *Cycle Audit & Cycle Review: a Scoping Study* Transfund NZ Research Report No. 180, Wellington, NZ, 2000

driving) and testing, and in any performance assessment system. This needs has been recognised in the UK³².

CAN would like to see the driver license testing being made more rigorous, with candidates being required to answer in their own words rather than multi-choice questions. The current multiple choice testing does not really test a good understanding of the road rules. To make things worse, the test sets can be bought, with people being able to memorise correct answers rather than having the understand the underlying rules. The world leader in road safety - Sweden - abandoned multiple choice testing years ago and replaced it with candidates having to answer in their own words.

- **Funding** (pp.79-82)

About 4% of vehicle trips are made by bicycle (p.52) and cycling accounts for about 2% of travel time, yet of the \$1.8 billion raised annually from road users and local residents, only about 0.1% is spent on cycling projects (Transfund, NZ Rooding Programme). Cycling is underfunded.

There are two reasons why **more money should be spent on cycling**: the risks imposed on cyclists should be mitigated by provision of a safer environment; and more cycling means a reduction in motor vehicle traffic and more safety overall (lower risk per cyclist, and fewer motor vehicles to impose risk on other road users).

Currently, fines are being paid into the consolidated fund. Little incentive is given to road controlling authorities to encourage safe road user behaviour, as they don't benefit directly from the fines. This should be changed as a matter of urgency.

Fines being imposed by road controlling authorities should be available to them for road safety initiatives and should not be diverted into the consolidated fund.

It is important that fined motorists see that their fines are being used for road safety improvements, rather than just filling government coffers

- **Analysis Tools** (pp.83-85)

We agree that "it is undesirable for some parts of the network to be riskier than others" (p.83) and that fairness or equity demands that these parts be targeted. **We wish to also see recognition of the equity issue involved when an unsafe roading environment suppresses demand or limits access for certain road user groups.**

- **Coordination** (pp.86-87)

CAN wishes to have a cycling representative on the Industry Consultative Group and on the National Road Safety Advisory Group. No other organisations represented on those bodies has the expertise to adequately represent the needs and interests of cyclists.

- **Delivery and communications** (pp.88-89)

CAN believes the role of road controlling authorities in improving safety for cyclists is crucial. "The essence of a successful road safety programme is to provide

³² Safety Framework for Cycling National Cycling Forum, London, 1999

an integrated road safety service within the local highway authority, which encompasses engineering and education, training and publicity; in liaison with other agencies concerned with enforcement, education and health."³³

The draft Strategy identifies the organisations that will need to be involved if the proposed strategy is to successfully implemented. However, it does not allocate roles and responsibilities in a clear way (this is done better in the current *National Road Safety Plan 1995* , pp.19-21). **CAN believes roles and responsibilities must be allocated to specific organisations in the final Strategy.**

- **Proposed road safety interventions**

CAN wishes to see the following interventions added to those listed in Appendix 2 (pp. 95-98)

Standards & Rules

- add road & bridge widening under Construction
- add need for major revision of cycle signage & markings in MOTSAM
- add need for revision of rules & regulations relating to cycling (including mandatory use of cycle lanes, status of cycle paths, right of way for cyclists on cycle paths over side streets)
- speed limits - CAN is not aware of any consultation with cyclists by road controlling authorities or the LTSA as part of the process of setting speed limits. We note that the Rule on speed limit setting requires community involvement and ask that cyclists' views be sought as part of the process

Compliance

- Road safety enforcement - add need for major revision of traffic laws relating to cycling
- Road safety surveys/audits - add need to adopt cycle audit & cycle review
- Crash attendance & investigation - add need to improve site management & investigation of cycle crashes; need to train Police in cyclist issues
- Professional training - not just enough to continue professional training - add need to beef up training on cyclist and pedestrian issues
- Advertising - extend advertising to include "Share the Road" campaign
- Community programmes - need to include explicit mention of Safe Routes to School

The vehicle

- vehicle standards & rules + inspection guidelines need to consider the impact of motor vehicles on cyclists & pedestrians
- Compliance (education) - include bicycle product safety information
- Compliance (performance assessment) - ensure this considers interaction with all other road users.

Standards & rules

- Driver licensing - amend to include cyclist and pedestrian issues
- Driver licensing - replace multi-choice questions with answering in own words

³³ Sabey, B. Safety Schemes and Targets *The National Cycling Strategy - Appendix* Department of Transport, London, UK, 1996, pp.118-112

- Driver licensing industry training standards - amend to include cyclist/pedestrian issues more.
- Road Code - don't just continue it, revise it to better reflect cyclists' concerns

Compliance (enforcement)

- Driver testing - include cyclist issues
- Auditing - ensure cyclist issues considered

Compliance (education)

- Community programmes - expansion to include Safe Routes to Schools
- Driver training & licensing courses - include material on cyclists & pedestrians
- School based education - rationalise cycle training courses & ensure national coverage; include Kiwi Cycling in key agencies.
- Add in adult cycle training
- Add in education/promotion of cyclist use of conspicuity aids, bells and lights

Other interventions

- Identify and fill the gaps in bicycle safety research
- Identify and fill the gaps in bicycle data

- **Structure of final document**

We found the layout of the draft Strategy did not make for easy submission-making. We recognise that the draft is a consultation document and assume that it contains a lot of information that will be omitted in the final Strategy. We are keen to see the final Strategy laid out in a clear and accessible way. ***We recommend that the final Strategy follows the structure of the new UK road safety strategy.***

Conclusion

As data presented in the draft Strategy clearly shows, cyclist risk remains higher than for most other road user groups in New Zealand. Given the low level of resources and attention given to cyclist safety over many years, this is hardly surprising. Traditional policies of advice and exhortation have clearly not worked. "A positive physical environment, creation of a cycling culture, reduction of danger at source, and a clear strategic role for cycling within transport policy would seem to be the real way forward for cycle safety."³⁴

Cycling Advocates Network
21 December 2000

³⁴ *More Bikes - Policy Into Best Practice* p.14.