

Submission to the

**Discussion Paper Sustainable Transportation
Update of the New Zealand Transport Strategy**

Prepared by:

André Cymbalista, Jane Dawson, and Andrew Macbeth

on behalf of:

Cycling Advocates' Network of New Zealand (CAN)

PO Box 6491

Auckland

New Zealand

Phone: +64 4 972 2552

Fax: +64 4 385 4962

secretary@can.org.nz

The Cycling Advocates' Network (CAN) is pleased to present this submission on the sustainable Transport Discussion Paper - Update of the New Zealand Transport Strategy.

The national Executive of the group has prepared this submission, with feedback from CAN members. We have based our submission on examination of the relevant documents. Some of our local member groups may also be making separate submissions. If you require clarification of any of the points raised by us, please feel free to contact us as detailed at the end of our submission.

The Cycling Advocates' Network Inc. (CAN) is New Zealand's national network of cycling advocate groups. It is a voice for recreational, commuter and touring cyclists. CAN works with central government and local authorities, on behalf of cyclists, for a better cycling environment. CAN has affiliated groups and individual members throughout the country, and links with overseas cycling organisations.

In addition, many national, regional and local government authorities, transportation consultancies, and cycle industry businesses are supporting organisations.

INITIAL DISCUSSION POINT: Proposed Guiding Concepts for New Zealand transport

Do you agree with the NZTS objectives, targets and discussion document guiding concepts?

The seven guiding concepts are repeated below for convenience, with CAN's opinion and comments IN CAPITALS. In addition, we propose **an eighth guiding concept** that addresses the issue of conflicting aims.

1. End-to-end transport solutions – Ensuring a strong focus on the end-to-end objective of moving people and moving freight safely and securely.
...the particular detailed modal solution of a “road”, “bus service” or “coastal shipping service” should be a consequence of the objective, NOT an end in itself.

AGREE

2. Getting best value from transport assets – Making the most of pre-existing transport assets, including transport corridors, and key transport nodes (including ports and airports) in the first instance.

...establishing new transport corridors or nodes can be extremely time-consuming and contentious.

AGREE

3. Integrating land use and transport planning – Ensuring planning is carried out in an integrated way so that existing and new public investment is used efficiently.

STRONGLY AGREE

4. Non-transport solutions – Looking for “non-transport” solutions such as improved urban planning and IT solutions.

...for example, numerous cities and towns around the world have achieved long-term success through compact urban form (which minimises transport demand) rather than urban sprawl (which increases transport demand).

STRONGLY AGREE

5. New technologies – Be willing to utilise new ideas and proven technologies to improve transport outcomes.

...technical advances over the last century have reduced construction costs, improved vehicle, ship and aircraft safety, and reduced harmful emissions per vehicle. As further technologies are proven we should utilise these improvements.

AGREE

6. a) User pays – Under most circumstances, the transport tasks should be funded on the basis of user pays, including externalities.

b) Subsidies – Decisions about long-term or start-up subsidies should be the result of conscious decision-making by government or local government.

STRONGLY AGREE. CAN believes that 'user pays' (definitely including externalities) should be the underlying principle. In some cases, subsidies might be considered for "disadvantaged" (such as remote rural communities), but these subsidies should be more generic subsidies, rather than specific petrol or transport subsidies. People have choices - to live in urban or rural areas; to spend their discretionary income on transport or other uses. However, subsidising transport directly may have the perverse effect of encouraging people to live in more remote communities and commute longer distances, undermining NZ's attempts to become more sustainable and its people to become more healthy by using more active transport choices.

Road transport cost should reflect the true cost of motoring, including full health costs. Please see the Ministry of Transport document 'Surface Transport Costs and Charges - Summary of Main Findings' (section 3.3), which states:

"Air pollution costs of \$442 million per annum are partially paid for by the health system, while climate change costs are not paid for by anyone. Water quality and quantity costs are not fully paid for by anyone either..... Noise pollution costs and their distribution are the subject of further work by the Ministry of Transport."

While a carbon charge would cover vehicle-induced climate change costs, it won't do the same for health-related costs. The health costs due to overweight/obesity and inactivity appear to have been

ignored in this report, yet they are directly related to transport choices. For example, a parent who chooses to drive a child to school because that has the least financial cost for them personally is making that decision because the full cost is not apparent, yet the community may pick up the costs of that child's inactivity as well as the cost of having another car appearing at the school gate, adding to congestion and safety concerns for other parents.

7. Effective education and advocacy – Changing the way we think about travel options for people and freight.

...including school, university and work place travel plans, and excellent information to freight originators about transport options.

AGREE

8. ***NEW*** There needs to be another 'guiding concept' around the way that future interventions will be prioritised. Where there are competing demands (amongst modes, projects, or funding) a transport-user hierarchy should be used to decide which to do first (e.g. cater for pedestrians, then cyclists, then public transport, then commercial vehicles, and lastly private motor vehicles).

This approach has worked well in many places overseas, and it has the advantage of encouraging people (by improving conditions) to use the more sustainable modes first, before deciding whether the less sustainable modes still need capacity increases. It should be a principal that is well understood by the public and decision-makers (elected and employed), so that investment in transport solutions becomes more consistent and sustainable across the country.

The **five objectives of the NZTS (2002)** are as follows:

- Assisting economic development

AGREE, but this should not happen at the expense of other objectives. Meeting this objective must involve using sustainable business practices. Perverse incentives must be avoided and businesses must face the full cost of their choices. For example, manufacturing chocolate biscuits in Dunedin, transporting them to SuperMercado X's centralised warehouse in Auckland, from where they get distributed back out to individual outlets (including SuperMercado X in Dunedin) should be actively discouraged by transport pricing. Externalities such as noise, vibration and community severance in communities through which trucks pass are hard to quantify or mitigate, and those communities end up bearing the cost of a decision made by that business for its own commercial (profit-driven) benefit.

- Assisting safety and personal security

AGREE

- Improving access and mobility

STRONGLY AGREE, BUT NOTE THAT IMPROVING ACCESS AND MOBILITY DOES NOT MEAN IMPROVING MOTORISED ACCESS AND MOBILITY. WALKING AND CYCLING ARE THE FIRST WAYS IN WHICH IMPROVING ACCESS AND MOBILITY SHOULD BE SOUGHT. IMPROVING ACCESS AND MOBILITY FOR MOTORISED TRAFFIC CAN HAVE THE NEGATIVE EFFECT OF REDUCING ACCESS AND MOBILITY FOR PEDESTRIANS AND CYCLISTS, ESPECIALLY WHEN NEW OR FASTER URBAN ROADS ARE PROVIDED, AS THESE CAN BLOCK ACCESS WITHIN COMMUNITIES.

- Protecting and promoting public health

STRONGLY AGREE. CYCLING (AND WALKING) CAN MAKE A HUGE CONTRIBUTION TO THE HEALTH OF OUR NATION.

- Ensuring environmental sustainability

STRONGLY AGREE

CAN'S VIEWS ON THE TARGETS ARE AS FOLLOWS:

DISCUSSION POINT 1: Assisting Economic Development

Proposed high-level targets to assist economic development for 2040

- Travel times by principal routes within and between major urban areas and key economic nodes (eg main seaports, airports and major industrial areas) to be improved relative to 2007 for identified critical intra and inter-regional connections, as determined with each region.

DISAGREE, WITH SOME EXCEPTIONS. WE UNDERSTAND THAT 'IMPROVED TRAVEL TIMES' IMPLIES THAT THERE IS LESS CONGESTION, WHICH MAKES ECONOMIC SENSE.

WE AGREE THAT TRAVEL TIMES SHOULD BE IMPROVED FOR PUBLIC TRANSPORT (AND FOR SOME COMMERCIAL VEHICLES, IF THAT CAN BE DONE WITHOUT DISTORTING THE DECISION-MAKING PROCESS WITHIN BUSINESSES), BUT NOT FOR PRIVATE CAR USE - OTHERWISE THE OTHER AIMS AND TARGETS ARE UNDERMINED.

HOWEVER, IMPROVING TRAVEL TIMES FOR ANY MODE SHOULD NOT BE ACCOMPLISHED BY BUILDING MORE ROAD CAPACITY. ROAD PRICING AND CONGESTION CHARGING, AND RE-ALLOCATION OF ROAD SPACE (E.G. FOR BUS LANES) SHOULD BE USED TO ENSURE THAT THE EXISTING INFRASTRUCTURE CAN BE USED TO PROVIDE IMPROVEMENTS FOR TRAVEL TIMES. IT IS ALSO IMPORTANT THAT IMPROVEMENTS TO TRAVEL TIMES FOR WALKING AND CYCLING EXCEED THOSE FOR SINGLE OCCUPANT VEHICLES (SOVs), TO IMPROVE WALKING AND CYCLING RELATIVE TO SOV TRAVEL.

A SECOND ASPECT OF THIS TARGET IS THE METHODOLOGY USED TO MEASURE TRAVEL TIMES. TRANSIT'S CURRENT METHODOLOGY IS BASED ON PARTS OF

JOURNEYS ONLY, THOSE PARTS CARRIED OUT ON MAIN ROADS. CAN BELIEVES THAT TRAVEL TIMES SHOULD BE MEASURED DOOR TO DOOR. THIS WILL RESULT IN JOURNEY TIMES FOR WALKING, CYCLING AND PUBLIC TRANSPORT BEING REPORTED AS MORE COMPETITIVE WITH CAR TRAVEL. WHEN DRIVERS HAVE TO SEARCH FOR CAR PARKS AND WALK TO THEIR DESTINATIONS, THEIR TRAVEL TIMES AND TRAVEL TIME VARIABILITY INCREASE, REDUCING THEIR APPARENT ADVANTAGE OVER MORE SUSTAINABLE MODES. THIS WILL HELP PEOPLE MAKE BETTER INFORMED AND MORE SUSTAINABLE TRAVEL CHOICES.

Proposed relevant intermediate or detailed targets for 2040

- Lift coastal shipping's share of inter-regional freight to around 30 percent (currently about 15 percent of tonne-kilometres).

AGREE. MOVING FREIGHT FROM ROADS TO COASTAL SHIPPING IMPROVES SUSTAINABILITY AND REDUCES HEAVY TRAFFIC ON ROADS, IMPROVING THE WALKING AND CYCLING ENVIRONMENT.

- Lift rail's share of domestic freight to around 25 percent (currently about 18 percent of tonne-kilometres).

AGREE. MOVING FREIGHT FROM ROADS TO RAIL IMPROVES SUSTAINABILITY AND REDUCES HEAVY TRAFFIC ON ROADS, IMPROVING THE WALKING AND CYCLING ENVIRONMENT.

- At least double the overall public transport mode share to seven percent of all passenger trips (currently about two to three percent).

AGREE

- Increase walking and cycling and other "active modes" to 30 percent of total trips in urban areas (currently about 17 percent).

THE TARGET IS SET TOO LOW. WE BELIEVE THAT THE TARGET FOR 2040 SHOULD BE 40%.

THE TARGET FOR CYCLING SHOULD BE SET INDEPENDENTLY FROM WALKING. BOTH SHOULD BE 20% BY THE YEAR 2040.

IT IS REASONABLE TO EXPECT THAT CYCLING JOURNEYS TO WORK CAN BE DOUBLED EVERY TEN YEARS, PARTICULARLY CONSIDERING THAT CYCLING LEVELS ARE CURRENTLY TOO LOW AT 2.5% OF JOURNEYS TO WORK.

THE STRATEGY SHOULD SET INTERMEDIATE TARGETS AS WELL. TARGETS FOR CYCLING (FOR ALL TRIPS IN URBAN AREAS) SHOULD BE AS FOLLOWS:

3% IN 2010

6% IN 2020

12% IN 2030 AND

20% IN 2040

OVERSEAS EXPERIENCE SHOWS THAT CAR FRIENDLY CITIES INHIBIT BOTH WALKING AND CYCLING, AND WHEN CAR-SUPPORTIVE POLICIES ARE REVERSED, WALKING AND CYCLING NUMBERS RAPIDLY CLIMB AGAIN. WORKPLACES COMMONLY ACHIEVE 10% CYCLE SHARE WHEN SHOWERS, LOCKERS AND CYCLE STORAGE ARE MADE AVAILABLE, AND THIS SEEMS TO BE IRRESPECTIVE OF CLIMATE AND TERRAIN. THIS MODAL SHARE REACHES 30% IN CITIES THAT HAVE GONE ON TO CREATE CYCLE FRIENDLY ROUTES THAT REDUCE TRAFFIC CONFLICTS. MANY PROFESSIONAL BUSINESSES IN CHRISTCHURCH ALREADY HAVE 20% CYCLE MODE SHARE, SO WE KNOW IT IS ACHIEVABLE IN NEW ZEALAND.

WE DO NOT BELIEVE THAT THE "GETTING THERE" WALKING AND CYCLING STRATEGY AND ITS IMPLEMENTATION PLAN CAN REACH THESE TARGETS WITHOUT A MORE HOLISTIC APPROACH TO TRANSPORT STRATEGY AND IMPLEMENTATION, SUCH AS THE UPDATED NZTS. TRANSPORTATION IS AN INTEGRATED SYSTEM. IT IS DIFFICULT TO ACCOMPLISH TARGETS FOR CYCLING IF THE MAJORITY OF TRANSPORT INVESTMENT CONTINUES TO BE FOR ROADING. THE IMPLEMENTATION OF THE NZTS SHOULD TAKE INTO ACCOUNT THAT INCREASED INVESTMENT TO IMPROVE MOTORISED TRANSPORT IS LIKELY TO HAVE A NEGATIVE EFFECT IN THE OUTCOMES FOR WALKING AND CYCLING.

REALLOCATION OF ROAD SPACE TO ACTIVE MODES SHOULD BE CONSIDERED A PRIORITY FOR ACHIEVING MODAL SHIFT. INCREASING THE AMOUNT OF ROAD SPACE FOR MOTORISED TRANSPORT WILL COMPROMISE WALKING AND CYCLING TARGETS.

CHANGING THE URBAN FORMAT WITH HIGHWAYS, TUNNELS, BRIDGES AND OTHER INFRASTRUCTURE DESIGNED EXCLUSIVELY (OR PRIMARILY) FOR MOTORISED TRANSPORT LEADS TO FRAGMENTATION OF URBAN SPACE AND CONTRIBUTES TO A REDUCTION IN THE MODAL SHARE OF SUSTAINABLE TRANSPORT MODES. WE BELIEVE THAT THE TARGETS FOR SUSTAINABLE TRANSPORT WILL NOT BE ACHIEVED UNLESS THERE IS A SUBSTANTIAL SHIFT IN CURRENT TRANSPORTATION SYSTEM INVESTMENT PRIORITIES AWAY FROM ROADS.

- Effective real-time information systems in place to enable road users to plan their journeys to avoid congestion, thereby minimising delay and fuel wastage, by 2015.

DISAGREE. THIS TARGET HAS THE POTENTIAL FOR RESOURCES TO BE WASTED ON IMPROVING SOV TRAVEL. THIS TARGET SHOULD BE MODIFIED SO THAT IT RELATES ONLY TO PUBLIC TRANSPORT, OTHERWISE IT WILL UNDERMINE TARGETS FOR ALL SUSTAINABLE TRAVEL MODES.

DISCUSSION POINT 2: Assisting Safety and Personal Security

a) Is our high-level target appropriate – are there other approaches would take?

"Operate to world best-practice safety standards for all modes of transport."

THIS IS TOO GENERAL. TARGETS SHOULD BE "SMART" - SPECIFIC, MEASURABLE, ACHIEVABLE, RELEVANT, TIME-BOUND. SO THE SAFETY TARGETS SHOULD BE SPECIFIC IN TERMS OF NUMBERS OF PEDESTRIANS, CYCLISTS, ETC. KILLED AND/OR SERIOUSLY INJURED, FOR THE YEAR 2040 AND FOR INTERMEDIATE TARGET YEARS.

WE QUOTE A STILL-RELEVANT PASSAGE FROM OUR SUBMISSION ON THE 'ROAD SAFETY TO 2010' STRATEGY IN 2000:

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 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.

Proposed relevant intermediate or detailed targets for 2040

Road deaths no more than 200 per annum.

DISAGREE - THIS SHOULD BE ZERO.

BUT WE ALSO NEED AN INTERMEDIATE TARGET (OF MAYBE 200?) BY THE YEAR 2015. IN ADDITION, SMART TARGETS FOR PEDESTRIAN AND CYCLIST FATALITIES AND SERIOUS INJURIES SHOULD BE DEVELOPED. IT ALSO NEEDS TO BE RECOGNISED THAT 'PERCEIVED SAFETY' CAN BE AS IMPORTANT (OR MAYBE MORE IMPORTANT) AS ACTUAL SAFETY WHEN IT COMES TO INDIVIDUALS DECIDING TO USE MODES DEEMED 'VULNERABLE', E.G. CYCLING AND WALKING.

Over 40 percent of the light vehicle fleet to have four star or better occupant protection (currently ten to 15 percent) by 2015 and 90 percent by 2040.

NEITHER AGREE NOR DISAGREE, BUT IF THIS TARGET IS IN, THERE ALSO NEEDS TO BE A TARGET FOR INCREASES IN THE USE OF DESIGNS THAT CAUSE LESS DAMAGE TO THOSE PEOPLE OUTSIDE THE CAR (E.G. GETTING RID OF BULL BARS IN URBAN AREAS, OR INCREASING THE USE OF PEDESTRIAN-FRIENDLY BUMPER BARS).

Over 25 percent of light vehicles to have electronic stability control (currently less than five percent) by 2015 and 95 percent by 2040.

NEITHER AGREE NOR DISAGREE

b) Are additional targets needed, for example, around security or perception of safety?

YES, NEW TARGETS ARE NEEDED. CAN RECOMMENDS THAT A NEW TARGET SHOULD BE THAT 90% OF NEW ZEALANDERS THINK CYCLING IS SAFE IS BY 2015.

MORE PEOPLE CYCLING MEANS MORE PERSONAL SAFETY FOR ALL - CYCLISTS AND PEDESTRIANS ARE 'EYES & EARS' ON THE STREETS, PREVENTING SOME LEVEL OF CRIME. AND IT HAS BEEN WELL ESTABLISHED THAT THE MORE CYCLISTS YOU HAVE, THE SAFER IT IS PER CYCLIST.

A TARGET SHOULD BE SET FOR CYCLIST TRAINING: BY 2040, 100% OF CHILDREN SHOULD HAVE BEEN THROUGH AN APPROVED CYCLIST TRAINING PROGRAMME BY THE TIME THEY REACH HIGH SCHOOL.

INTERMEDIATE TARGETS SHOULD BE SET FOR THIS ALSO - WE SUGGEST THIS SHOULD BE DONE IN CONSULTATION WITH THE CYCLIST TRAINING PROJECT THAT IS CURRENTLY BEING DEVELOPED.

THERE SHOULD BE TARGETS SET FOR THE NUMBERS OF 'TRAFFIC CALMED ZONES' AND FOR IMPLEMENTED 'SAFE ROUTES TO SCHOOLS' PROGRAMMES.

AND THERE SHOULD BE TARGETS FOR AN IMPROVING LEVEL OF ROAD USER COURTESY, AND FOR IMPROVED LEVELS OF DRIVER TRAINING AND TESTING.

c) Are our targets achievable given the necessary investment and behaviour change needed to reach them?

We believe the targets for active modes are achievable because it has to be remembered that investment in cycling, walking and public transport will reduce the present investment in health cost & injury cost, clean up of storm water and other environmental damage caused by motorised transport.

d) Should we, for example, develop initiatives to ensure turnover in our vehicle fleet is higher, to allow faster adoption of new safety technology?

We believe that renewing the existing fleet should not be a priority. The amount of carbon emissions needed to build a new vehicle is seven times larger than the amount of carbon emissions that the same vehicle uses on average in its lifetime. Incentives (such as policies, practices and pricing) are needed to encourage motor vehicle owners to use their vehicles less.

DISCUSSION POINT 3: Improving Access and Mobility

a) Are our high-level targets appropriate – are there other approaches we could take?

THE TARGET FOR WALKING AND CYCLING (30% BY 2040) IS SET TOO LOW. WE BELIEVE THAT THE TARGET FOR 2040 SHOULD BE 40%.

THE TARGET FOR CYCLING SHOULD BE SET INDEPENDENTLY FROM WALKING. BOTH SHOULD BE 20% BY THE YEAR 2040.

IT IS REASONABLE TO EXPECT THAT CYCLING JOURNEYS TO WORK CAN BE DOUBLED EVERY TEN YEARS, PARTICULARLY CONSIDERING THAT CYCLING LEVELS ARE CURRENTLY LOW AT 2.5% OF JOURNEYS TO WORK. THE STRATEGY SHOULD SET INTERMEDIATE TARGETS AS WELL. REASONABLE TARGETS FOR CYCLING (FOR ALL TRIPS IN URBAN AREAS) SHOULD BE AS FOLLOWS:

3% IN 2010
6% IN 2020
12% IN 2030 AND
20% IN 2040

OVERSEAS EXPERIENCE SHOWS THAT CAR FRIENDLY CITIES INHIBIT BOTH WALKING AND CYCLING, AND WHEN CAR-SUPPORTIVE POLICIES ARE REVERSED, WALKING AND CYCLING NUMBERS RAPIDLY CLIMB AGAIN. WORKPLACES COMMONLY ACHIEVE 10% CYCLE SHARE WHEN SHOWERS, LOCKERS AND CYCLE STORAGE ARE MADE AVAILABLE, AND THIS SEEMS TO BE IRRESPECTIVE OF CLIMATE AND TERRAIN. THIS MODAL SHARE REACHES 30% IN CITIES THAT HAVE GONE ON TO CREATE CYCLE FRIENDLY ROUTES THAT REDUCE TRAFFIC CONFLICTS. MANY PROFESSIONAL BUSINESSES IN CHRISTCHURCH ALREADY HAVE 20% CYCLE MODE SHARE FOR THE TRIP TO WORK.

WE DO NOT BELIEVE THAT THE "GETTING THERE" WALKING AND CYCLING STRATEGY AND ITS IMPLEMENTATION PLAN CAN REACH THESE TARGETS WITHOUT A MORE HOLISTIC APPROACH TO TRANSPORT STRATEGY AND IMPLEMENTATION, SUCH AS THE UPDATED NZTS. TRANSPORTATION IS AN INTEGRATED SYSTEM. IT IS DIFFICULT TO ACCOMPLISH TARGETS FOR CYCLING IF THE MAJORITY OF TRANSPORT INVESTMENT CONTINUES TO BE FOR ROADING. IMPLEMENTATION OF THE NZTS SHOULD TAKE INTO ACCOUNT THAT INCREASED INVESTMENT TO IMPROVE MOTORISED TRANSPORT IS LIKELY TO HAVE A NEGATIVE EFFECT IN THE OUTCOMES FOR WALKING AND CYCLING. ROADING INVESTMENT IS INCREASING AT 5 TIMES THE RATE OF INFLATION; WE SEEM TO BE TRYING TO BUILD OUR WAY OUT OF CONGESTION WHEN OVERSEAS EXPERIENCE AND OUR OWN NZTS SAY THAT THIS IS FOLLY. THERE ARE MUCH BETTER USES FOR THIS INCREASED EXPENDITURE - EITHER IN SUSTAINABLE TRANSPORT, OR IN OTHER SECTORS OF THE ECONOMY.

REALLOCATION OF ROAD SPACE TO ACTIVE MODES SHOULD BE CONSIDERED AS A PRIORITY IF MODAL SHIFT IS TO BE ACHIEVED. INCREASING ALLOCATION OF ROAD SPACE TO MOTORISED TRANSPORT WILL COMPROMISE WALKING AND CYCLING TARGETS.

CHANGING THE URBAN FORMAT WITH HIGHWAYS, TUNNELS, BRIDGES AND OTHER INFRASTRUCTURE DESIGNED EXCLUSIVELY FOR MOTORISED TRANSPORT LEADS TO FRAGMENTATION OF URBAN SPACE AND CONTRIBUTES TO A REDUCTION IN THE MODAL SHARE OF SUSTAINABLE TRANSPORT MODES. WE BELIEVE THAT THE TARGETS FOR SUSTAINABLE TRANSPORT WILL NOT BE ACHIEVED UNLESS THERE IS A SUBSTANTIAL SHIFT IN CURRENT TRANSPORTATION SYSTEM INVESTMENT PRIORITIES AWAY FROM ROADS.

One of the reasons that car ownership is higher than other OECD countries is that there is no compulsion for third-party insurance in NZ. If mandatory third-party insurance were introduced, motor vehicle users would be forced to pay their share of transport costs.

b) Are additional targets needed, for example, one around urban design?

Significant tools to help achieve the kind of city where people want to walk and cycle are:

- Restrict parking in city and town centres ie urban areas;
- Speed limit of 30 km/h within city and town centres; and
- Price transport and parking to at least cover all costs, including externalities such as air pollution, health (including obesity), degradation of urban design quality.

c) Are our targets achievable given the necessary investment and behaviour change needed to reach them?

Yes, these targets are TOO EASILY achievable. The current level of transport investment is more than sufficient. There is a need to SHIFT current investment patterns towards more sustainable modes. Demand for sustainable transportation modes is highly elastic in relation to fuel prices. Research New Zealand polled 500 people in February 2008, before the most recent price hikes, and found 32% were driving less.

The survey found 54% of respondents would drive less if petrol was more than \$2 a litre, with that figure rising to 64% of those earning less than \$40,000 a year (Research New Zealand, 2008). This suggests that there is a high elasticity of transport choice, and indicates that PRICING MECHANISMS can be a highly effective mean to promote sustainability in the transport sector in the SHORT TERM. The same radio article concluded that NZ should introduce subsidies for petrol so that people could still drive everywhere. There needs to be much better information about our transport choices and appropriate policies. Subsidising petrol would encourage unsustainable transport and should not be considered in New Zealand (or elsewhere).

d) Are we satisfied with 2007 travel times as the baseline to aim for in the future?

No. There are flaws in the methods currently used to measure travel time.

TRANSIT'S CURRENT METHODOLOGY IS BASED ON PARTS OF JOURNEYS ONLY, THOSE PARTS CARRIED OUT ON MAIN ROADS. CAN BELIEVES THAT TRAVEL TIMES SHOULD BE MEASURED DOOR TO DOOR, FOR ALL TRANSPORT MODES.

- We are concerned with the methods currently used to measure congestion. Some congestion indicators, such as roadway Level of Service and the Travel Time Index only consider delays to motorists. These indicators ignore the benefits to travellers who shift to alternative modes, or from smart growth policies that increase land use accessibility by clustering common destinations closer together. Indicators that reflect impacts per capita rather than per vehicle are more suitable for evaluating overall congestion costs.
- We are also concerned that the current congestion and travel time indicators relate only to motor vehicle travel, and only consider portions of journeys on main roads. If journey times were compared across all modes from door to door, then walking and cycling in particular and public transport to a certain extent, would be seen as more reliable and more comparable in travel times to motor vehicle travel. Door to door travel times are not only more representative of what people have to deal with on a day to day basis, but they also include the parking and access time that drivers need, which can be quite variable. The use of the current indicators is biased in favour of car travel and should be abandoned.
- In general, use of roadway level of service, average traffic speeds and travel time index to evaluate traffic congestion tends to favour roadway capacity expansion solutions, while indicators such as door to door travel times, per-capita congestion delay and vehicle costs tend to favour sustainable, multi-modal and land use management solutions, therefore these should be used instead of the currently used congestion and travel time indicators.

e) How will our aim of reducing travel time on all modes (including road) affect our aim of increasing public transport?

The use of the current indicators is biased in favour of car travel and should be abandoned. In general, use of roadway level of service, average traffic speeds and travel time index tends to favour roadway capacity expansion solutions, while indicators such as door-to-door travel times, per-capita congestion delay and vehicle costs tend to favour sustainable, multi-modal and land use management solutions, therefore these should be favoured instead of travel time. Reduction of motor vehicle door-to-door travel times may be an appropriate target if this is accomplished by road, parking and congestion pricing, rather than road building.

f) Are our intermediate public transport targets appropriate and achievable?

Appropriate no, achievable yes. The targets are TOO EASILY achievable. Demand for sustainable transportation modes is highly elastic in relation to fuel prices.

Research New Zealand polled 500 people in February 2008, before the most recent price hikes, and found 32% were driving less. The survey found 54% of respondents would drive less if petrol was more than \$2 a litre, with that figure rising to 64% of those earning less than \$40,000 a year (Research New Zealand, 2008). This suggests that there is a very high elasticity of transport choice, and indicates that PRICING MECHANISMS can be a highly effective mean to promote sustainability in the transport sector in the SHORT TERM.

IN REGARD TO PROPOSED SUPPORTING TARGETS

We strongly support the revision of funding procedures for walking and cycling projects, and we agree that there is a problem with accounting for benefits of walking and cycling. But we don't believe that this is the solution to improve sustainability in the transport sector.

However, this supporting target should say "revise funding procedures for walking and cycling projects" (not "investigate the need to"). We know already that the funding procedures are not working, so just do it!

We are concerned, though, that while the principle is laudable, it could set the bar much higher for walking and cycling projects than for roads and other transport projects. We should be making it easier to approve and fund these projects, not putting blockages in their way. CAN believes that this is not a target so much as a policy, and if it is not applied well, it could be counter-productive to the thrust of the UNZTS.

Funding procedures for walking and cycling projects need to recognise that these projects are intrinsically harder to design, approve and fund than road projects when compared dollar-for-dollar of capital expense, simply because they are so much cheaper to build per kilometre. Road Controlling Authorities always try to spend as much of their budgets as possible, so this biases their efforts in favour of big ticket items like roads and public transport infrastructure.

We contend that there are other distortions in the decision making process, which contribute to unsustainable decisions, and that there is an urgent need to review the decision making processes. We are particularly concerned with the cost-benefit analysis methods used to evaluate and compare transportation projects. One aspect of this is the premise that benefits can be calculated and credited to road building projects for small travel time savings (often of the order of mere seconds) for hundreds of users.

In addition, sustainable transportation investments (such as rail, public transport, walking, and cycling) mature in far longer periods than unsustainable investments (such as increasing road capacity for motorised transport). The problem is that the discount rate used to compare all types of projects is set too high, and this favours unsustainable transportation modes that deliver benefits in the short term, to the detriment of more sustainable choices that take longer to mature.

Discounting (whatever the rate chosen) at a constant rate militates against solutions to long-run environmental problems, which need to be evaluated over a much greater time horizon, sometimes 50 years or more. The appropriate procedure for longer time horizons is to adopt declining discount rates. In the UK, there is a directive to use 3.5% declining rate (Grom, Hepburn, Koundouri and Pearce 2005).

We believe that a rate approximately around 3% would be appropriate. Using a rate of 10% makes sense for private citizens and corporations, but policy makers should be more patient than private agents.

We are also concerned with the generalised excessive confidence in the "predict and provide" approach that has set the transport agenda through the last half of the 20th century, and continues to do so.

The traditional and predictive approaches assume that, through transport models, future traffic levels can be anticipated on the basis of stable quantitative relationships. However, traffic forecasts are dependent inter alia on forecasts for economic growth, land use patterns, and demographic change - none of which can be forecast with any great accuracy. Given that the foundations are so unstable, it seems pertinent to ask whether the effort spent refining modelling methodologies (not to mention the resources devoted to financing and constructing the infrastructure expansion schemes) has been repaid compared to what might have been achieved through other approaches, such as the "predict and prevent" (pricing mechanisms) and travel demand management (Evans 1999).

At the same time that there is an excessive reliance on the "predict and provide" approach, there is almost no attention given to the use of pricing mechanisms to improve sustainability of the transport system. As noted above, there is sufficient evidence that demand for sustainable transportation modes is highly elastic in relation to prices. Research New Zealand polled 500 people in February 2008 and found 32% were driving less. The survey found 54% of respondents would drive less if petrol was more than \$2 a litre, with that figure rising to 64% of those earning less than \$40,000 a year (Radio New Zealand, 2008). This suggests that there is a very high elasticity of transport choice, and indicates that PRICING MECHANISMS can be a highly effective mean to promote sustainability in the transport sector in the SHORT TERM.

We are also concerned with the lack of a comprehensive evaluation of road projects. Evaluation of infrastructure projects should take into account the transportation rebound effects and generated traffic. Generated traffic is the additional motor vehicle travel that occurs when a roadway improvement increases traffic speeds or reduces vehicle operating costs (SACTRA, 1994; Hills, 1996; Litman, 2001; FHWA, 2000). Increasing urban roadway capacity tends to generate additional peak-period trips that would otherwise not occur. This consists of a combination of diverted vehicle trips (trips shifted in time, route and destination), and induced vehicle travel (shifts from other modes, longer trips and new vehicle trips). Over the long run, generated traffic often fills a significant portion (50-90%) of added urban roadway capacity (Hansen and Huang, 1997; Noland, 2001).

In summary, in order to ensure a more sustainable transportation system, it is not enough just to make it marginally easier to approve walking and cycling projects. It has to be more difficult to approve road projects that not only are clearly unsustainable, but that carry, as a side effect, negative contribution to walking and cycling rates.

DISCUSSION POINT 4: Protecting and Promoting Public Health

a) Are our high-level targets appropriate – are there other approaches we could take?

High-level target: Public health effects of transport to be at accepted international standards.

THIS IS NOT A 'SMART' TARGET.

Proposed relevant intermediate or detailed targets for 2040

Ensure a substantial reduction in premature deaths and serious illnesses arising from air pollution from motor vehicles.

DISAGREE - THIS SHOULD AIM TO BE ZERO BY 2040, WITH STAGED TARGETS. IT ALSO NEEDS TO BE MADE 'SMART'.

Manage noise to minimise any public health effects.

THIS SHOULD ALSO INCLUDE VIBRATIONS. VIBRATIONS ARE STRESS-INDUCING FOR THOSE LIVING WITH THEM ON A REGULAR BASIS. IT ALSO NEEDS TO BE MADE 'SMART'.

35 percent of the vehicle fleet to have emissions technology consistent with Euro 442 (or equivalent) standard by 2015. AGREE

Imported used petrol, LPG, CNG and diesel vehicles (light and heavy) are to be of Euro 4 (or equivalent) standard by 2012. AGREE

Imported new petrol, LPG, CNG and diesel vehicles (light and heavy) are to be of Euro 4 (or equivalent) standard by 2009. AGREE

Increase walking and cycling and other “active modes” to 30 percent of total trips in urban areas (currently about 17 percent). AS DISCUSSED PREVIOUSLY, THE WALKING AND CYCLING TARGETS SHOULD BE SEPARATED BY MODE, SHOULD BE HIGHER (20% EACH) AND SHOULD HAVE TARGETS FOR INTERMEDIATE YEARS.

Proposed supporting targets

Investigate the need to revise funding procedures for walking and cycling projects to ensure all costs and benefits of such projects are accounted for in their assessment by 2009.

We strongly support the revision of funding procedures for walking and cycling projects, and we agree that there is a problem with accounting for benefits of walking and cycling. But we don't believe that this is the solution to improve sustainability in the transport sector.

However, this supporting target should say "revise funding procedures for walking and cycling projects" (not "investigate the need to"). We know already that the funding procedures are not working, so just do it!

We are concerned, though, that while the principle is laudable, it could set the bar much higher for walking and cycling projects than for roads and other transport projects. We should be making it easier to approve and fund these projects, not putting blockages in their way. CAN believes that this is not a target so much as a policy, and if it is not applied well, it could be counter-productive to the thrust of the UNZTS.

Funding procedures for walking and cycling projects need to recognise that these projects are intrinsically harder to design, approve and fund than road projects when compared dollar-for-dollar of capital expense, simply because they are so much cheaper to build per kilometre. Road Controlling Authorities always try to spend as much of their budgets as possible, so this biases their efforts in favour of big ticket items like roads and public transport infrastructure.

Please see our response on proposed supporting targets for 'Improving Access and Mobility' above for further comment on funding mechanisms.

The National Environmental Standard on Air Quality includes ambient air quality standards that must be met by regional councils by 2013. These standards cover carbon monoxide, nitrous oxide, ozone, particulates and sulphur dioxide. To help councils meet these standards further targets are being proposed within the vehicle fleet strategy discussion paper.

b) Are additional targets needed

c) Are our targets achievable given the necessary investment and behaviour change needed to reach them?

d) Is our intermediate walking and cycling target appropriate and achievable

AS DISCUSSED PREVIOUSLY, THE WALKING AND CYCLING TARGETS SHOULD BE SEPARATED BY MODE, HIGHER (20% EACH) AND SHOULD HAVE TARGETS FOR EARLIER YEARS.

e) How can we best achieve the substantial increase in mode share suggested for walking and cycling?

- Better management of urban sprawl
- Road and congestion pricing
- Parking restrictions and increased parking pricing
- High occupancy vehicle priority
- More widespread use of inner city "urban densification" and slower traffic operating speeds
- Distance based fees (converting vehicle insurance and registration fees into distance-based charges)
- Freight transport management

f) Should we develop initiatives to ensure turnover of our vehicle fleet is higher, to allow improved exhaust emission technology, for example, to be adopted more quickly?

THERE IS A DANGER THAT WE WILL END UP IMPORTING EVEN MORE MOTOR VEHICLES THAN WE CURRENTLY DO. HOWEVER, MEASURES THAT RESULT IN OBSOLETE AND HIGHLY POLLUTING VEHICLES SHOULD BE PROGRESSIVELY REMOVED FROM THE FLEET THROUGH THE WARRANT OF FITNESS/ VEHICLE EXHAUST CHECKING SYSTEMS AND APPROPRIATE PRICING MECHANISMS. WE SEE A FUTURE OF FEWER MOTOR VEHICLES (NATIONALLY AND INTERNATIONALLY); NZ DOES NOT NEED TO BE THE WORLD'S GRAVEYARD FOR OBSOLETE MOTOR VEHICLES.

DISCUSSION POINT 5: Ensuring Environmental Sustainability

Government agreed high-level targets for ensuring environmental sustainability for 2040

Halve per capita domestic transport greenhouse gas emissions. AGREE

Local environmental impacts of transport (including air and water quality) to be at accepted international standard. AGREE WITH THE INTENTION, BUT THIS IS NOT A "SMART" TARGET

Government agreed relevant intermediate or detailed targets for 2040

Become one of the first countries in the world to widely deploy electric vehicles. DISAGREE. THIS MIGHT BE AN OUTCOME BUT SHOULD NOT BE A TARGET. WHAT WE DO NOT NEED IS JUST AS MANY VEHICLES RUNNING AROUND AT SIMILAR SPEEDS TO TODAY'S MOTOR VEHICLES, MAIMING AND SCARING PEDESTRIANS AND CYCLISTS AND CROWDING OUR ROADS AND CITIES, EVEN IF THEY ARE POWERED BY ELECTRICITY INSTEAD OF FOSSIL FUELS. THE ONLY POTENTIAL GAIN IS EMISSION AND CARBON DIOXIDE REDUCTIONS, BUT EVEN THESE MIGHT NOT ACCRUE IF COAL IS USED TO GENERATE ELECTRICITY. THIS TARGET COULD ALSO LEAD US TO ADOPT NUCLEAR ENERGY, WHICH BRINGS ITS OWN SERIOUS SUSTAINABILITY CHALLENGES.

A biofuels sales obligation that will begin at a level of 0.53 percent from 2008, increasing to 3.4 percent of annual petrol and diesel sales by 2012. DISAGREE. BIOFUELS ARE LIKELY TO HAVE NO NET EFFECT ON CARBON EMISSIONS.

Reduce the kilometres travelled by single occupancy vehicles, in major urban areas on weekdays, by ten per cent per capita by 2015 compared to 2007. AGREE WITH THE SPIRIT, BUT THIS IS FAR TOO TIMID. WE RECOMMEND 30%. PERHAPS A MORE USEFUL TARGET WOULD BE TO REDUCE TOTAL MOTOR VEHICLE KILOMETRES TRAVELLED (VKT) BY 5% PER ANNUM.

Reduce the rated CO₂ emissions per kilometre of combined average new and used vehicles entering the light vehicle fleet to 170 grams CO₂ per kilometre by 2015 (currently around 220 grams CO₂ per kilometre) with a corresponding reduction in average fuel used per kilometre. AGREE

Ensure 80 percent of the vehicle fleet is capable of using at least a ten percent blend of bio-ethanol or bio-diesel, or is electric powered, by 2015. DISAGREE. BIOFUELS ARE LIKELY TO HAVE NO NET EFFECT ON CARBON EMISSIONS.

Proposed relevant intermediate or detailed targets for 2040

Identify and remove any barriers to the uptake of plug-in hybrid and full electric vehicles that meet appropriate safety standards. ANY SUCH EFFORTS SHOULD BE UNDER FULL COST RECOVERY, OTHERWISE NON-MOTORISTS WOULD BE CROSS-SUBSIDISING MOTORISTS.

Effective real-time information systems in place to enable road users to plan their journeys to avoid congestion, minimising delay and fuel wastage, by 2015. ANY SUCH EFFORTS SHOULD BE UNDER FULL COST RECOVERY, OTHERWISE NON-MOTORISTS WOULD BE CROSS-SUBSIDISING MOTORISTS.

Lift rail's share of domestic freight to around 25 percent (currently about 18 percent of tonne-kilometres). AGREE

Lift coastal shipping's share of inter-regional freight to around 30 percent (currently about 15 percent of tonne-kilometres). AGREE

At least double the overall public transport mode share to seven percent of all passenger trips (currently about two to three percent). AGREE

Increase the public transport mode share of peak hour travel (journeys to work) in Auckland, Wellington and Christchurch from an average of nine percent to 20 percent and work with each region to optimise peak hour travel targets. AGREE

Increase walking and cycling and other "active modes" to 30 percent of total trips in urban areas (currently about 17 percent). AS DISCUSSED PREVIOUSLY, THE WALKING AND CYCLING TARGETS SHOULD BE SEPARATED BY MODE, SHOULD BE HIGHER (20% EACH) AND SHOULD HAVE TARGETS FOR INTERMEDIATE YEARS.

No net loss of indigenous vegetation or fauna from infrastructure construction or maintenance. AGREE GENERALLY, HOWEVER THERE MAY BE WALKING OR CYCLING PROJECTS THAT SHOULD BE BUILT, ALTHOUGH THEY MIGHT HAVE MINOR INDIGENOUS VEGETATION OR FAUNA EFFECTS.

Proposed supporting targets

Implement the Sustainable Water Programme of Action and develop a National Environmental Standard on Drinking Water Quality. AGREE

Develop stormwater guidelines by 2009. AGREE

The maritime industry has an outcome target to reduce the amount of oil spilled from vessels into the marine environment by 50 percent by 2010. AGREE

Targets for harmful noise and air emissions (such as Nitrous Oxide and particulate matter) are discussed under the public health objective.

NZEECS supporting targets

Work with local government to promote travel demand management planning and support businesses and schools to put travel plans in place. AGREE, ALTHOUGH IT IS MORE A POLICY THAN A TARGET.

Review funding policies to encourage greater provision of public transport, walking and cycling. AGREE, ALTHOUGH IT IS MORE A POLICY THAN A TARGET.

Support development of Neighbourhood Accessibility Plans and the Active Living Programme to encourage mode shift. AGREE, ALTHOUGH IT IS MORE A POLICY THAN A TARGET.

Review regional passenger transport mode share targets by 2012 through scheduled reviews of regional land transport strategies, and subsequent regional passenger transport plans. AGREE

NZES supporting target

Work with the New Zealand-based aviation industry, and within international forums, to encourage the use of more fuel-efficient practices and aircraft. AGREE, ALTHOUGH IT IS MORE A POLICY THAN A TARGET.

a) Are our intermediate or detailed targets appropriate – are there other approaches we could take?

In NZ 90% of peak trips are single occupancy, and this reflects the socio-economic status of the car owner. Capital cost of cars, fuel prices, and cost of public transport alternatives influence whether there will be a change of mode, or more car share, and this can be achieved with multi-pronged policies: - congestion charges, higher taxes on carbon based fuels, larger subsidies for public transport so that comparative costs of travel are more favourable, restrictions on car entry to inner city, reduction in parking supply and increased parking charges, faster alternative modes like light rail, cycle lanes and traffic signal phasing and progression times favouring active modes.

b) Are additional targets needed, for example, one around engine size?

Registration and other fees should be related to engine size.

c) Are our targets achievable given the necessary investment and behaviour change needed to reach them?

d) How can the reduction in single occupancy vehicle travel best be achieved?

e) Should we develop initiatives to ensure turnover of our vehicle fleet is higher, to allow faster adoption of electric vehicles, for example?

DISCUSSION POINT 6. Making Progress towards all the NZTS objectives

a) What pathways allow New Zealand's sustainability to be reached while also making good progress against all the NZTS objectives?

As we have already stated above, we strongly support the revision of funding procedures for walking and cycling projects, and we agree that there is a problem with proper accounting for benefits of walking and cycling. But we don't believe that this is the big solution to improve sustainability in the transport sector.

We contend that there are other distortions in the decision making process, which contributes to unsustainable decisions, and that there is an urgent need to review the decision making processes.

We are particularly concerned with the cost-benefit analysis methods used to evaluate and compare transportation projects. Sustainable transportation investments (such as rail, public transport, walking, and cycling) mature in far longer periods than unsustainable investments (such as increasing road capacity for motorised transport). The problem is that the discount rate used to compare all types of projects is set too high, and this favours unsustainable transportation modes that deliver benefits in the short term, to the detriment of more sustainable choices that take longer to mature.

To make things worst, discounting (whatever the rate chosen) at a constant rate militates against solutions to long-run environmental problems, which need to be evaluated over a much greater time horizon, sometimes 50 years or more. The appropriate procedure for longer time horizons is to adopt declining discount rates. In the UK, there is a directive to use 3.5% declining rate (Grom, Hepburn, Koundouri and Pearce 2005).

We believe that a rate approximately around 3% would be appropriate. Using a rate of 10% makes sense for private citizens and corporations, but policy makers should be more patient than private agents.

We are also concerned with the generalized excessive confidence in the "predict and provide" approach that has set the transport agenda through the last half of the 20th century, and continues to do so.

The traditional and predictive approaches assume that, through transport models, future traffic levels can be anticipated on the basis of stable quantitative relationships. However, traffic forecasts are dependent inter alia on forecasts for economic growth, land use patterns, and demographic change - none of which can be forecast with any great accuracy. Given that the foundations are so unstable, it seems pertinent to ask whether the effort spent refining modelling methodologies (not to mention the resources devoted to financing and constructing the infrastructure expansion schemes) has been repaid compared to what might have been achieved through other approaches, such as the pricing mechanisms and travel demand management (Evans 1999).

At the same time that there is an excessive reliance on the "predict and provide" approach, there is almost no attention to use of pricing mechanisms to improve sustainability of the transport system. As we have already stated above, there is sufficient evidence that demand for sustainable transportation modes is highly elastic in relation to prices. Research New Zealand polled 500 people this month, before the most recent petrol price hikes, and found 32% were driving less. The survey found 54% of respondents would drive less if petrol was more than \$2 a litre, with that figure rising to 64% of those earning less than \$40,000 a year (Radio New Zealand, 2008). This suggests that there is a very high elasticity of transport choice, and indicates that PRICING MECHANISMS can be a highly effective mean to promote sustainability in the transport sector in the SHORT TERM. However, we are aware that these pricing mechanisms can be more harmful to lower income level strata of society, therefore we suggest that pricing schemes are accompanied by ample provision of transportation choices. In that regard, we argue that cycling (and walking, to a certain extent) is the only transportation mode that is capable of contributing to long term sustainability and to reduction of poverty at the same time.

We are also concerned with the lack of a comprehensive evaluation of road projects. Evaluation of infrastructure projects should take into account the transportation rebound effects and generated traffic. Generated traffic is the additional motor vehicle travel that occurs when a roadway improvement increases traffic speeds or reduces vehicle operating costs (SACTRA, 1994; Hills, 1996; Litman, 2001; FHWA, 2000). Increasing urban roadway capacity tends to generate additional peak-period trips that would otherwise not occur. This consists of a combination of diverted vehicle trips (trips shifted in time, route and destination), and induced vehicle travel (shifts from other modes, longer trips and new vehicle trips). Over the long run, generated traffic often fills a significant portion (50-90%) of added urban roadway capacity (Hansen and Huang, 1997; Noland, 2001).

In summary, in order to ensure a more sustainable transportation system, it is not enough just to make it marginally easier to approve walking and cycling projects. It has to be more difficult to approve road expansion projects that deliver, as a side effect, negative contribution to walking and cycling rates.

b) Do you agree with the measures and targets suggested in this paper?

As stated above, we have strong objections to using travel time to measure congestion.

Transit NZ's current methodology is based on parts of journeys only, with those parts carried out on main roads. CAN believes that travel times should be measured door-to-door, for a variety of transport choices.

- We are concerned about the methods currently used to measure congestion. Some congestion indicators, such as roadway Level of Service and the Travel Time Index only consider delays to motorists. These indicators ignore the benefits to travellers who shift to alternative modes, or from smart growth that increase land use accessibility by clustering common destinations closer together. Indicators that reflect impacts per capita rather than per vehicle are more suitable for evaluating overall congestion costs.
- We are also concerned that the current congestion and travel time indicators relate only to motor vehicle travel, and only consider portions of journeys on main roads. If journey times were compared across all modes from door to door, then walking and cycling in particular and public transport to a certain extent, would be seen as more reliable and more comparable in travel times to motor vehicle travel. Door to door travel times are not only more representative of what people have to deal with on a day to day basis, but they also include the parking and access time that drivers need, which can be quite variable. The use of the current indicators is biased in favour of car travel and should be abandoned.
- In general, use of roadway level of service, average traffic speeds and travel time index to evaluate traffic congestion tends to favour roadway capacity expansion solutions, while indicators such as door to door travel times, per-capita congestion delay and vehicle costs tend to favour sustainable, multi-modal and land use management solutions, therefore these should be favoured instead of travel time.

c) Are there other measures and targets you believe should be considered?

Door to door travel times, per-capita congestion delay and vehicle costs.

And also measures of connectivity. Connectivity refers to the degree to which a road or path system is connected, and therefore the directness of travel between destinations (VTPI, 2005). A hierarchical road network with many dead-end streets that connect to a few major arterials provides less accessibility than a well-connected network. Increased connectivity reduces vehicle travel by reducing travel distances between destinations and by improving walking and cycling access, particularly where paths provide shortcuts, so walking and cycling are relatively direct.

Connectivity can be evaluated using various indices (Handy, Paterson and Butler, 2004; Dill, 2005). This can be measured separately for pedestrian, bicycle and motor vehicle travel, taking into account shortcuts for nonmotorized modes.

d) If so, what are they, and how would they help achieve the objectives of the NZTS?

Door to door travel times, per-capita congestion delay and vehicle costs. If journey times were compared across all modes with these indicators, then walking, cycling and public transport would be seen as more reliable and more comparable in travel times to motor vehicle travel. Door to door travel times are not only more representative of what people have to deal with on a day to day basis, but they also include the parking and access time that drivers need, which can be quite variable. The use of the current indicators is biased in favour of car travel and should be abandoned.

DISCUSSION POINT 7. Transport choices

a) Is this an accurate summary of the transport choices facing New Zealand in the foreseeable future?

- We believe that the expenditure desired over the next four years for road projects is overestimated. We believe that the models used to estimate "desire for road projects" is biased towards the replication of the existing transportation model, which favours individual motorised transport.
- We contend that increasing road capacity generates more traffic and more demand for roads in the long term. We believe that investment to increase road capacity results in increasing the funding gap in the long term.
- The range of desirable transportation choices that is in our future is different from the desirable transportation choices that are in our past. Perceived funding constraints will change as a result of New Zealand having a sustainable transportation system, backed by a sustainable decision making model. The gap should be reduced with reduction of desire for additional road projects, and not with increased funding for road projects.
- The perceived gap in funding for road projects results in an ever increasing expenditure in road projects, which does not solve the congestion problems in the long term. We contend that the existing expenditure pattern has contributed to the impoverishment of all New Zealanders. New Zealanders would be certainly better off if investment in road projects were shifted to public transportation and active transportation modes, while land use and development were better managed to discourage urban sprawl. Public transportation, walking and cycling have much lower individual and societal costs than individual motorised transport.
- We find contradictory that there is a constraint in funding for road projects, and at the same time, the target investment for specific cycling and walking projects was not met in 2006/07 (Transit New Zealand, 2007), with several million dollars unspent. This demonstrates to us that cycling is not a priority, and that smaller projects are not a priority either. Most administrative and technical resources are dedicated to larger projects, and there is no reason why it should be that way. We appreciate that there is a willingness within

government to move towards a more sustainable future. Accordingly, it should be easier and faster to get approval and funding for small, sustainable transport projects than for large road projects.

- We understand that there is increased demand for road space for cars and vans, but we believe that a great proportion of this demand for roadspace is created as a result of decades of investment in road projects that favour the use of SOVs. These investments encourage car use, and as a result, the demand for roads is higher. At the same time, these investments often undermine the use of sustainable transportation modes, such as rail, light rail, buses, cycling and walking.
- We agree strongly with the general principle of dealing with congestion depending on what is causing it, and we welcome the use of diversified strategies to deal with congestion.
- We are concerned with the methods currently used to deal with congestion. Often these methods contribute to generate more traffic, particularly roadway capacity expansion, highway grade separation, and unfriendly intersection improvements such as large roundabouts without proper provision for cyclists.
- We would like to see the following methods prioritised to deal with congestion, since these do not generate traffic:
 - Better management of urban sprawl
 - Road and congestion pricing
 - Parking restrictions and increased parking pricing
 - High occupancy vehicle priority
 - More widespread use of inner city "urban densification" and slower traffic operating speeds
 - Distance based fees (converting vehicle insurance and registration fees into distance-based charges)
 - Freight transport management
- We prefer the least cost planning approach to resource planning that:
 - Considers demand management solutions equally with strategies to increase capacity.
 - Considers all significant impacts (costs and benefits), including non-market impacts.
 - Involves the public in developing and evaluating alternatives.

b) Do you agree that transport problems cannot always be solved with transport solutions? If so what ideas do you have for new ways of working to solve transport issues?

c) In particular, how do you see transport planning and land use working together?

Public transport can't work in a city where people travel very long distances to work at inconsistent times with a variety of stops in between to cater for children, shopping, leisure, health needs, etc. The creation of de-centralised malls, medical services, industrial areas etc all mean that people have to go further to get what they need. Catching a bus to work may be fine, but what do you do when you have a medical or financial appointment? For any home which includes dependents, cars become an essential in this type of urban

sprawl, especially if the carers work (single or married couple). What do you do if your child has an accident at school? Catch a bus?

Real attention to urban design is needed to develop innovative strategies that deal effectively with life. We don't have the population to sustain a reliable, safe, modern public transport system in our current style of land use. We do, however, have the pragmatic, intellectual resources to come up with some new ideas. City planners have a great deal to answer for in this area. With all the talk about accepting accountability for the environmental consequences of behaviour, one would think the authorities could 'get a bit more real' about coming up with designs that meet human needs.

The following are general conclusions that can be made about the effects of land use patterns on travel behavior.

- Per capita automobile travel tends to decline with increasing population and employment density, particularly if clustered into compact centers.
- Per capita automobile travel tends to decline with increased land use mix, such as when commercial and public services are located within or adjacent to residential areas.
- Per capita automobile travel tends to decline in areas with connected street networks.
- Per capita automobile travel tends to decline in areas with attractive and safe streets that accommodate pedestrian and bicycle travel, and where buildings are connected to sidewalks rather than set back behind parking lots.
- Per capita automobile travel tends to decline in areas with traffic calming and other measures that reduce automobile traffic speeds.
- Larger and higher-density commercial centres tend to have lower rates of automobile commuting because they tend to support better travel choices (more transit, ridesharing, better pedestrian facilities, etc.) and amenities such as cafes and shops, although they may increase average commute distances.
- Per capita automobile travel tends to decline with the presence of a strong, competitive transit system, particularly when integrated with supportive land use (high-density development with good pedestrian access within ½-kilometer of transit stations).
- Most land use strategies are mutually supportive, and are more effective if implemented together and in conjunction with other TDM strategies. Some land use management strategies that improve access could increase rather than reduce total vehicle travel unless implemented with appropriate TDM strategies.
- Land use management can provide additional benefits and costs to society in addition to transportation objectives.

REFERENCES

Baumol, W. J. (1968), 'On the Social Rate of Discount', *American Economic Review* 57, 788–802.

Dill, J. (2005), *Measuring Network Connectivity for Bicycling and Walking*, School of Urban Studies and Planning, Portland State University (<http://web.pdx.edu/~jdill/ALRbikes>).

EVANS, R., Guy S. and Marvin, S. (1999) "Making a Difference: Sociology of Scientific Knowledge and Urban Energy Policies", in *Science, Technology and Human Values*, Vol. 24 No. 1, winter 1999 105-131

FHWA (2000), *Highway Economic Requirements System: Technical Report*, Federal Highway Administration, U.S. Department of Transportation (www.dot.state.oh.us/gasb34/FHWAAsset_Management+GASB_34/eei%20team/hers_st/documentation/HERS%20Tech%20printready.pdf).

Groom, B., Hepburn, C., Koundouri, P., and Pearce, D. (2005). *Declining Discount Rates: The Long and the Short of it*. *Environmental & Resource Economics*, 32: 445-493

Handy, S., Paterson, R. and Butler, K. (2004), *Planning for Street Connectivity: Getting From Here to There*, Planning Advisory Service Report 515, American Planning Association (www.planning.org).

Hansen, M. and Huang, Y. (1997), "Road Supply and Traffic in California Urban Areas," *Transportation Research A*, Vol. 31, No. 3, pp. 205-218.

Hills, P. (1996), "What is Induced Traffic?" *Transportation*, Vol. 23, No. 1, Feb. 1996, pp. 5-16.

Lind, R. (1982), 'A Primer on the Major Issues Relating to the Discount Rate for Evaluating National Energy Options', in R. Lind (ed.), *Discounting for Time and Risk in Energy Policy*, (pp. 21–114). Washington, Resources for the Future.

Litman, T. (2001), "Generated Traffic; Implications for Transport Planning," *ITE Journal*, Vol. 71, No. 4, Institute of Transportation Engineers (www.ite.org), April, 2001, pp. 38-47; at www.vtpi.org/gentraf.pdf.

Noland, R. (2001), "Relationships Between Highway Capacity and Induced Vehicle Travel," *Transportation Research, A*, Vol. 35, No. 1, January 2001, pp. 47-72; also available at www.epa.gov/tp/trb-rn.pdf.

Research New Zealand (2008) "Higher fuel prices keep Kiwis' cars at home", downloaded from <http://www.researchnz.com/pdf/Media%20Releases/>

RNZ%20Media%20Release%20-%202002-20-08%20Petrol%20Prices.pdf on 29 February 2008.

SACTRA (Standing Advisory Committee on Trunk Road Assessment) (1994), Trunk Roads and the Generation of Traffic, UKDoT, HMSO (London).

Transit New Zealand (2007) "Transit New Zealand Annual Report 2006/2007". Transit New Zealand.

VTPI (2005). "Roadway Connectivity". In "Online TDM Encyclopedia". Downloaded from <http://www.vtpi.org/tdm/tdm116.htm> on 29 February 2008.