



5 October 2009

The Executive Director  
National Infrastructure Unit  
The Treasury  
PO Box 3724  
Wellington

Sent by email to: [info@infrastructure.govt.nz](mailto:info@infrastructure.govt.nz)

Dear Sir/Madam

Thank you for the opportunity to consider and make a submission on Infrastructure: Facts and Issues. CAN, the Cycling Advocates' Network, is not your usual infrastructure stakeholder, but we bring a different perspective which we feel needs to be heard as you prepare a National Infrastructure Plan. We would welcome the opportunity to discuss our comments further with you.

### **About CAN**

The Cycling Advocates' Network of NZ (CAN) is this country's national network of cycling advocates. It is a voice for all cyclists – recreational, commuter and touring. We work with central government and local authorities, on behalf of cyclists, for a better cycling environment. We have affiliated groups and individual members throughout the country, and links with overseas cycling organisations.

### **General Comments**

CAN welcomes the discussion document as a precursor to the National Infrastructure Plan. Our submission responds to many of the seven questions you have asked:

1. **Base information:** Is the sectoral analysis contained here an accurate and informative description of the sector? If not, what changes are required to make it so?
2. **Missing issues:** Are there important infrastructure issues not mentioned in this document?
3. **Decision-making:** This document suggests that for projects to contribute to community/national welfare and economic growth, they must have expected benefits (measured comprehensively) that are greater than their estimated costs (also measured comprehensively) – see the decision-making principles in the ‘Policy Context’ chapter. As well as considering distributional or equity considerations, are there other considerations that should be taken into account and if so, what is the case for that?
4. **Cross-sectoral issues:** What cross-sectoral issues are faced by operators/users of infrastructure in each sector? This document identifies a number of cross sectoral issues. Are there other cross-sectoral issues that should be included in a National Infrastructure Plan?
5. **Regulatory reform:** Are there important regulatory constraints on the development of infrastructure that are not being addressed by the government’s current regulatory reform programme?
6. **Aspiration:** For each infrastructure sector, is it possible or desirable to define the service level New Zealand should aspire to? If so, what should it be and why?
7. **Link to economic growth:** What additional investment would help New Zealand to increase its rate of economic growth? How can we be confident that this additional investment is a prudent use of scarce funds?

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**PARA 13**

We support the planned broadband investment; anything that has the potential to reduce travel because people can work and do other business from home helps reduce travel and the need for more road-building.

For a 20-year plan, we question the need for so much focus on a rugby tournament that is only two years away.

This paragraph refers to "Roads of National Significance". In our view, these should be referred to "Routes of National Significance" (RONS). That would avoid jumping straight to the conclusion that roads are the "solution". We note that at least three of the seven identified routes have parallel railway corridors.

This paragraph also states: "Roads enable the transport of goods to purchasers and workers to work." Roads do much more than this. Only about 20% of car use is associated with the trip to (and from) work. So any attempt to increase road capacity as a means of improving productivity is much more beneficial to non-productive uses and users, who do not pay directly for the "improvements".

We suggest a fifth "immediate priority" for discussion in this part of the infrastructure plan should be the National Cycleway, given the economic benefits that it is expected to generate.

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#### PARA 15

This states: "Finally, we identify two issues that the government expects may be nationally important over the longer term. The first is the relationship between **Auckland transport planning and the urban form of Auckland**. Second is the issue of **efficient use of roads** and the way we **pay for them**. These issues are raised in part as examples of the sorts of issues that the government wishes to identify as part of its infrastructure planning."

We agree that the first issue is important. Managing land use is an effective way of managing transport demand. This is a poorly understood and used concept in New Zealand.

Secondly, our road user payment system is poorly-targeted, by being based on road user charges (RUC) and fuel excise duties (FED). The inefficient use of roads (congestion) for just a few hours a day is not addressed by having such blunt pricing instruments as these.

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#### PARA 19

This states, inter alia, that "Congestion creates inefficiency and makes it more difficult for businesses to operate and grow." However, we have a poor understanding of congestion (measuring only main-road portions of some journeys for some modes – not walking, cycling or train travel – in four cities in New Zealand), and base our decision-making on a flawed model that highly values travel time, ignoring the fact that most "lost" time due to congestion would not be put to productive use in the economy, even if it could be "saved".

Inevitably, when new capacity is added to a road network, other users occupy that capacity quickly, nullifying any short term benefits. We simply do not adequately price the scarce resource of peak time road space.

A significant portion of morning and afternoon peak period congestion is comprised of parents doing additional trips or distance to transport children to school. Reducing trip-making (or vehicle-kilometres travelled) by even a few percent can make the difference between congested and uncongested highways.

So it would be much more cost-effective to invest in managing travel demand at peak times than attempting to provide additional capacity. Specifically, finding ways to allow kids to walk and cycle to school can reduce motor vehicle trips, while having other community benefits such as increased health and fitness and helping kids gain a sense of independence. School travel plans have been successfully implemented in many New Zealand schools, with Auckland having had significant success.

The concept of demand management is well understood in the electricity sector; yet the National Land Transport Programme and the Government Policy Statement on Land Transport Funding fail to realise that this is the single most cost-effective solution to our "congestion" problem. We note that the New Zealand Transport Strategy 2008 correctly identifies this opportunity.

As identified in a recent paper<sup>1</sup> (to be presented at the NZ Cycling Conference in November 2009):

- Better use of existing networks is significantly more productive than providing "more of the same"
- Focusing on changing the decisions of a small number of car drivers results in better outcomes all round
- Cycling investment as part of wider capacity improvements will help with cost-effective network optimisation in the medium to long term

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#### PARA 21

"This work programme is led by the Minister of Transport, Hon Steven Joyce, supported by the Ministry of Transport and the New Zealand Transport Association." The NZTA is the New Zealand Transport Agency.

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#### PARA 42

This states: "Major transport projects of this type have a significant impact on the location and form of economic activity — they tend to shape urban development rather than follow it. For example, a third harbour crossing would likely lead to more development of the suburbs north of the harbour (in a similar manner to the growth facilitated by the existing bridge) while a CBD rail tunnel would likely result in greater intensification of the inner city, suburbs and town centres that lie along the rail network, e.g. New Lynn. Strategic decisions of this kind can lock in patterns of growth for many decades, whether good or bad."

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<sup>1</sup> "The importance of making best use of existing networks in promoting productivity", Chris Money, Hyder Consulting (New Zealand) 2009

We agree. We'd like to see "intensification of the inner city" (for example through investment in rail) as we feel this will better ensure Auckland against a future with less travel as a result of climate change and "peak oil".

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PARA 45

We agree with the statement that current road pricing through FED and RUC is "relatively unsophisticated and weakly-targeted".

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PARA 45

We agree with the view that public debate is needed on the long-term issues of affordability and efficiency, including new forms of charging and pricing. We also feel that Treasury has a vital role in these debates by providing sound advice based on economic theory and overseas best practice.

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PARA 47

This paragraph identifies an important issue – how we decide whether a project should be the responsibility of the private sector, local government or central government. In our view, most traffic is local traffic (even on urban state highways) and funding and maintaining the transport system should be the domain of local government. We would like to see this issue explored in the National Infrastructure Plan.

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PARA 63

Just because "local government property tax is an efficient tax that is cheaper to collect than income tax or GST" does not mean that we should rely on this to fund roads. Rural roads would be unsustainable under this model. Equity suggests that a more user-pays system is required. The current FED and RUC go part way towards this, but still result in substantial cross-subsidies between regions with Auckland being the main beneficiary at the expense of the rest of the country.

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PARA 64

We do not agree that the funding of local roads from nationally collected charges should be an exception to the general rule that financial transfers from central to local government should generally be avoided. In addition, the collection of FED and RUC nationally is allocated largely by national directives, rather than locally. The concept of regional fuel taxes was rejected recently at a national level when it had the potential to contribute usefully to the problem locally.

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**PARA 79**

We do not agree that "Over the last decade it became apparent that New Zealand was under-investing in transport infrastructure." The evidence given for this does not support the claim. In our view, road user charges and other "transport" revenue still do not cover the costs of externalities associated with transport, such as those associated with climate change, air and water pollution, community severance and road crashes. Accordingly, we believe that New Zealand has over-invested in roads to the detriment of rail (really only an issue in Auckland and Wellington) and in urban development/ high quality urban design in our towns and cities.

We also echo a sentiment from a recent OECD<sup>2</sup> report on infrastructure: "But more (infrastructure) is not always better." The National Infrastructure Plan would be helpful if it reviewed optimal levels of investment in infrastructure, following the lead of the OECD.

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**PARA 82**

The "main purposes" of NZTA "are to collect FED and RUC, to build and maintain state highways and to contribute to the funding of local roads and public transport". The NZTA website identifies its functions as: "to provide an integrated approach to transport planning, funding and delivery". This would seem to be a more appropriate description of the agency than that written. This broader definition would include the management of road safety and the implementation of government transport policy (including, for example, travel demand management).

A separate paragraph describing the role of MOT would also be helpful.

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**PARA 83**

This paragraph and the next three come under the heading "Funding and Pricing". This section should contain information on road pricing, including the extent to which it is used or not used in New Zealand and road pricing in the context of overseas experience and trends.

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**PARA 87**

The diagram "Land Transport Sector Planning" on page 22 describes the outputs from the GPS as "Broad guidance for NZTA on how to give effect to LTMA". We suggest that this should say "Broad guidance for NZTA and local authorities on how to give effect to LTMA".

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<sup>2</sup> Égert, B., T. Kozluk and D. Sutherland (2009), "Infrastructure Investment: Links to Growth and the Role of Public Policies", OECD Economics Department Working Papers, No. 686, OECD publishing, © OECD. doi:10.1787/225678178357

Similarly, the document "Regional Land Transport Strategies/State Highway forecast" should have an expanded output including local authorities. We suggest: "Identifies and prioritises projects for NZTA and local authorities to consider."

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**PARA 91**

The relatively high rate of road fatalities is not so much an indictment of our road infrastructure budgets, but a reflection of New Zealand's car-dependence and generally steep topography, a function of being geologically young. Most of our serious road crashes are on rural roads with high speeds. In both urban and rural areas, bringing travel speeds down is the single most effective way to improve road safety.

Stating that our fatality rates are double those of the Netherlands, Sweden and the UK is not a useful comparison, in the context of our very different urban densities and the proportions of travel done on urban and rural roads. But it is worth looking at car ownership and use rates, compared to walking, cycling and public transport. These modes are inherently cheaper to provide infrastructure for and safer.

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**PARA 92**

"To help inform which road safety measures are appropriate, the government has released the road safety 2020 discussion document for public consultation." To this, we would add that there are more costs to the country due to road safety impacts than due to road congestion; yet our road spending is heavily skewed towards the latter; the economics of this should be explored in the national infrastructure plan.

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**PARA 93**

This states: "The best indicator of infrastructure sufficiency (including safety features) is likely to be the benefit cost ratios of road projects for which there is insufficient funding. The existence of a significant number of projects with high expected benefit cost ratios that cannot be funded could indicate that there is, or will be, insufficient infrastructure."

There are many cycling projects that have benefit cost ratios of greater than four, yet don't get funded because GPS2 has severely limited the funding for cycling. Meanwhile, the roads of national significance and many other road projects have benefit cost ratios of around one and should not be funded.

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**PARA 94**

This states: "Officials are currently endeavoring to establish whether there are many projects with significant benefit cost ratios that remain unfunded, and hope to have this information in time for the first National Infrastructure Plan." While we agree that there are too many projects funded that have poor benefit cost ratios, we are concerned with basing transport decision-making on the benefit cost analysis as the market is a poor tool for this purpose.

Our principal concern is with the value of travel time, whereby projects that shave seconds off trip times are assessed as being worthwhile. This might have some merit for freight but is inappropriate for people, when in most cases the time saved would not be put to productive (in an economic sense) purposes. In addition, there are just too many externalities for benefit cost analysis to be a valid tool in transport decision-making.

We note that "endeavoring" uses the American spelling.

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#### PARA 95

The plan to allow longer and heavier trucks would not survive if costs and benefits were fully attributed. Not only will this plan exacerbate damage to road and bridge infrastructure, but the safety of pedestrians and cyclists will be compromised by these larger vehicles. Better use of our rail and coastal shipping would make much more sense economically. Damage to roads and bridges increases with the fourth power of axle weight. A loaded truck can do as much damage to a road or bridge as 1,000 to 10,000 cars, and increasing the allowable weight on a given truck from 44 to 53 tonnes will more than double the damage it does to roads or structures.

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#### PARA 96

The statement that "congestion can be addressed either by building more road space or by taking demand management measures..." is naïve. As has been demonstrated many times in New Zealand and overseas, traffic expands to use the available road capacity. The market is a poor mechanism for rationalising the use of road space. This point is already made in Paragraph 45 of your discussion document: "building our way out of congestion is unlikely to be an affordable or efficient strategy".

Instead of "predict and provide", the traditional road infrastructure mentality whereby travel demand in a future year is predicted using transport models and plans are developed to increase road capacity to accommodate the predicted growth, we should be managing travel demand. We have minor congestion problems for a small proportion of the day (a few hours every 24) in a few cities in New Zealand. Mostly our roads have excess capacity most of the day – this inefficiency should be at the core of a Treasury document on infrastructure. Rationing scarce road space by time of day and location would be the advice we would expect from Treasury.

Other western countries are not attempting to build their way out of traffic congestion. Why should New Zealand think it can do this when others have concluded this is folly? And why should New Zealand, a net importer of fossil fuels and at the end of the supply chain, want to put all its eggs in the road-network-expansion basket?

The risk of New Zealand being stuck without transport in 10 or 20 years or longer seems real, and a Treasury document should be assessing and looking for options to this scenario. Rail and coastal shipping should be supported for the movement of freight, and walking and cycling (and public transport for longer trips) are pragmatic responses to these issues.

A significant proportion of New Zealanders can not or choose not, to drive. There is a fundamental equity issue in trying to provide accessibility through a roading system aimed at drivers. We have all the roads we need for accessibility. Much more cost-effective solutions are available to improve access than road-building.

Have the long-term maintenance costs of expanding the road network been assessed? New Zealanders will not want to face the tax implications of maintaining a white elephant road system with excess capacity for future reduced demand.

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**PARA 97**

Missing from this discussion on climate change is the fact that global and New Zealand fossil fuel dependence will need to diminish over the next 20 years.

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**PARA 298**

It is not clear who considers the seven roads of national significance to be essential. It is not universally accepted; we maintain that they if road use was better priced, no new road building would be required.

Both the private sector and the local and central government sector have a role in providing infrastructure. The National Infrastructure Unit of the Treasury is therefore approaching a number of private sector and local government organisations seeking information and views on these questions. We prefer submissions that, where possible, provide empirical or other evidence to support the views they express.

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**PARA 335**

New Zealand's productivity being low (22 out of 30 OECD countries) may be a function of our low population density and inherent transport system inefficiency compared to the other countries (rather than the result of excessive cost compliance by small businesses). Depending on a road-and-private-motor-vehicle-based transport system is likely to push us further down the list. Now is the time to move towards a less fossil-fuel dependent transport system for freight and people, with walking and cycling having a much larger role in urban areas, and rail and coastal shipping becoming increasingly more important for freight, along with freight and general travel demand management measures.

Another cross-sectoral issue not identified in this section of the discussion document is the relationship between transport and health. A transport system that facilitates walking and cycling will result in a healthier population, resulting in considerable savings for the health sector. It would be useful for the National Infrastructure Plan to explore this issue.

Such a transport system would necessitate slower traffic in urban areas, which would result in a much improved safety record for the system, improving our performance in comparison with other OECD countries and reducing our health care system costs.

Yet slower traffic is penalised under the current benefit cost analysis system, which greatly rewards travel time savings. The infrastructure plan could usefully explore international practice in this area – in our view, less reliance is placed on the value of travel time overseas, and transport systems are better and safer accordingly.

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**PARA 338**

In a discussion about the Resource Management Act, it should be pointed out better integration of land use and transport has been a focus of whole-of-government thinking for many years. It can prevent urban sprawl which would result in inefficiencies across many forms of urban infrastructure, including roads, sewers, power and water supply and disposal.

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**PARA 367**

As noted in this paragraph, climate change effects are likely to have an adverse effect on the resilience of New Zealand's infrastructure. Not only will roads, highways and bridges be more expensive to maintain after extreme weather events, but as fuels become relatively more expensive (through supply and demand, as well as the emissions trading scheme), more people will look for less fuel-intensive travel modes such as walking, cycling and public transport. Our current transport system is not conducive to walking and cycling, with motor vehicles allowed to dominate urban areas in a way not tolerated in other OECD countries. Building more, faster roads (such as the roads of national significance) flies in the face of international trends.

The paragraphs on climate change are useful, but do not go far enough to point us to a better future.

Please contact Andrew Macbeth, CAN Technical Advisor, (03 343 8224) or [andrew@can.org.nz](mailto:andrew@can.org.nz) for follow-up as required.

Yours faithfully



Axel Wilke (Co-chair, Cycling Advocates' Network of New Zealand)