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The Committee Secretary
Senate Standing Committee on
Rural and Regional Affairs and Transport
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Dear Sir/Madam—

Inquiry into public transport infrastructure and funding

I apologise for the lateness and brevity of this submission. I am currently finalizing a book manuscript on the topic of providing effective public transport in low-density urban environments, which is due with my publishers in a few weeks. I will be happy to elaborate on these brief comments at the committee's hearings in Melbourne next week.

I do not propose to cover ground that has been adequately dealt with by other submitters, and wish to expressly endorse the comments of Professor Currie from Monash University (sub. 34) about the need for a reversal of the historic bias in federal transport funding. I also endorse Prof. Currie's comments about the importance of public transport network planning, and his reference to the European Union's HiTrans manual (Nielsen et al) on network planning principles (I note in passing that Nielsen's manual is expressly based on my 2000 book *A Very Public Solution: Transport in the Dispersed City*).

The problem with public transport in Australian cities is not just insufficient investment. Where money has been made available, it has often been wasted. The main reason for this is widespread ignorance of the principles of public transport network planning which, as well as enabling superior service to be provided for a wider range of trip types, also enables existing infrastructure to be used more effectively.

This last question is particularly relevant because rail operators across Australia's east coast have convinced themselves and their governments that their systems are currently at capacity and could not carry more patrons without multi-billion-dollar investments in central city tunnels and metros — investments that will soak up funds that could be better spent extending rail networks to currently-unserved areas and integrating them with buses, trams and ferries. To illustrate the point, Brisbane's electrified rail system is larger than those of all Canadian cities with rail combined

(Montreal, Toronto, Calgary, Edmonton and Vancouver). Yet, it carries barely one-fifteenth as many passengers as the Canadian systems. For more on this question, with particular relevance to Melbourne, see the attached report entitled *Does Melbourne Need Another Central City Rail Tunnel?*

A key reason for the lack of efficient network planning in Australian public transport is poor governance structures and organizational cultures and skill bases. Melbourne provides an extreme example of these problems, with its balkanised shambles of monopoly private franchisees, regulators and bureaucrats. Melbourne requires literally hundreds of public officials just to ineffectively monitor the activities of private rail and tram franchisees; by contrast, the regional transit agency responsible for the whole Canton (State) of Zurich only requires 34 staff to actually plan and manage a system that carries around 100 million passengers more than Melbourne's annually (see www.zvv.ch/en).

The remaining material provides some additional thoughts on transport planning and governance. It is taken from my submission to Infrastructure Australia late last year, and I apologise for the 'plagiarism', while stressing that it remains relevant.

Yours sincerely,



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Introduction

Australian history is replete with examples of wasteful investment in infrastructure, from the Ord River Scheme to the early 20th-century rail lines built to isolated areas that could never conceivably generate sufficient traffic to justify their costs. It is important that the substantial fund IA supervises not fall victim to a new version of this phenomenon.

Most submissions to this review will argue that there has been insufficient investment in new urban road and rail infrastructure in Australian cities. I disagree, and maintain that the main problem has been poor governance and planning, resulting in wasteful investments that have generally failed to reduce urban travel times (note: as explained below, this is a quite different concept from congestion), and have often worsened environmental outcomes.

Some evidence from Canada on congestion and travel time

It is often assumed that congestion is the same thing as the amount of time spent traveling. This is not the case: indeed, the relationship is often reversed. Travel time is determined not just by speed, but also by distance and the number of trips made. Transport policies that speed up travel but encourage more or longer trips may well increase travel time (as well as environmental damage); conversely, policies that focus on reducing the need to travel may produce time savings even if average speeds decline. For passenger travel, a further complication is added by the fact that time spent walking actually produces health benefits, so even if a mode shift to walking results in longer trip times, a true accounting of costs might still conclude that travel costs have been reduced.

We do not have good data on trends in travel times in Australian cities, because no consistent surveys have been conducted. Instead, we have extremely dubious estimates of 'congestion costs', which involve comparing (using computer traffic modeling) the total time spent traveling now with the time that would be spent in an imaginary scenario, in which:

- (a) everyone travels at the speed limit, and
- (b) the ability to do this does not increase the amount of travel.

Since we know that (a) is impossible to achieve in the real-world of large cities, and that if it were achieved it would negate (b), the calculation of congestion costs is completely meaningless.

Fortunately, Statistics Canada does conduct an excellent survey of actual travel times for the journey to work across that country's cities, and the Canadian census provides additional information on trip lengths that corroborates the survey results. Since Canadian cities are the most similar to ours of any country's, this evidence should be taken very seriously by Australian policy-makers. Unfortunately, it has been largely ignored.

The evidence on travel times is set out in the table below:

Average travel time for making the round trip between home and workplace

	1992	1998	2005
		Minutes	
Canada total	54	59	63
Regions			
Atlantic	39	50	51
Quebec	52	57	63
Ontario	59	63	68
Prairies	45	53	57
British Columbia	59	61	60
Census metropolitan areas			
Toronto	68	76	79
Montreal	62	65	76
Vancouver	70	68	67
Ottawa-Gatineau	57	62	65
Calgary	52	64	66
Edmonton	50	58	62
Autre RMR/AR	44	50	53
Non RMR/Rural	44	50	54

(Source: Statistics Canada, 2006, p. 15; table 1.)

Travel times increased in all major cities between 1992 and 2005, with the striking exception of Vancouver. The significance of the result is increased by the fact that Vancouver had the fastest population growth over the relevant period. What did Vancouver do that was different from the other cities? It was the only city that built no major new roads, and deliberately adopted a policy of allowing traffic congestion to worsen as a demand management measure.

Significantly, the survey period coincides with the life of the Livable Region Strategic Plan and accompanying Long Range Transport Plan, which were both adopted in 1993. The two plans promote 'self-containment' and mode shift away from the private car, through a genuinely integrated package of planning and transport measures (Mees, 2007). Proposals for major new roads were rejected because they would 'work against the proposed land-use objectives and the pro-transit orientation of the GVRD Livable Region Strategy which the transport plan is intended to reinforce' (GVRD, 1993, p. 57). And congestion was treated as a demand management measure, rather than a problem:

Congestion is usually considered an evil; however, allowing congestion to deteriorate for single-occupant vehicles is a practical method of promoting transit and carpools... For instance, buses/carpools in HOV [high occupancy vehicle] lanes will gain an edge since the relative time saved by escaping lineups will be greater. (GVRD 1993, p. 26.)

The plan has worked. The 2006 Canadian census results confirm that Vancouver was the only city nationally where the average distance traveled to and from work fell; in addition, there were significant increases in the share of work trips made on foot and by public transport, and declines in car driver trips (Statistics Canada, 2008). Part of the reduction in travel times was due to a significant increase in the speed of public transport, the result of well-planned infrastructure investment and service improvements, which have been designed to avoid creating incentives for longer trips (GVRD, 1993).

Vancouver has effectively been following the advice on transport policy offered in the Garnaut Review, which recommends that 'governments plan for more compact cities and invest in a shift from high- emissions modes to rail, public transport, walking and cycling' (Garnaut, 2008, p. 525).

As for the economic results, it may be worth noting that Vancouver's port is busier (in tonnage terms) than that of any Australian city, while both the Economist Intelligence Unit and Mercer Human Resource Consulting have rated it at or towards the top of the 'livability' rankings, ahead of Australian cities like Melbourne which used to win awards of this kind.

The opposite approach in Melbourne: the East West Link Needs Assessment

The approach to transport planning in Vancouver presents a particularly stark contrast with that found in the city it replaced as leader in the global 'livability' rankings. The problems with Melbourne's transport planning are well illustrated by the East West Link Needs Assessment (EWLNA) presented to the Victorian government in April of this year.

As the study's leader Sir Rod Eddington has himself observed, the initial problem with the study was the narrow terms of reference, which focused on part of Melbourne, not the whole. In addition (and this is my point, not Sir Rod's), the focus of the study and its title made it clear that the study team was being asked to justify particular proposed projects, rather than genuinely examine all the alternatives.

The result is that the EWLNA reads as a document relentlessly seeking to justify particular infrastructure projects regardless of the evidence or the results of analysis. Time does not permit a full examination, but consider the following two issues.

The EWLNA's consultant engineers reported that there was in fact relatively little east-west travel in the study corridor. Their report presents a 'select link analysis' for traffic from the Eastern Freeway, observing that:

The majority of vehicles traveling along the Eastern Freeway, approximately 60%, have a destination in the CBD or inner area. Approximately 5% of vehicles (3,000) travel [west] to at least Racecourse Road while almost 20% travel south along Punt Road... (SKM et al, 2008, p. 54).

But the EWLNA presents *precisely the same diagram* with the following commentary:

Contrary to a commonly held view that nearly all Eastern Freeway traffic is headed for the inner city, the EWLNA has found that around 40 per cent of daily traffic from the freeway travels beyond the central city area. As shown below, this substantial demand for east-west travel filters out across the road network, contributing to congestion on key cross city arterial routes (Eddington, 2008, p. 36).

The EWLNA's consultants carried out a conventional cost-benefit analysis of the recommended projects, plus an additional analysis of 'wider economic benefits' (WEB). The results (reported at Meyrick et al, 2008, p. 34) were that the combined rail and road projects produced a conventional BCR of only 0.7, rising to 0.95 with WEB included. Although results for the road proposals were not presented separately, those for rail were, enabling the BCR for the road projects to be estimated: the result is 0.45, or 0.73 with WEB included. But nowhere in the public EWLNA documents are these figures, which strongly suggest both projects represent extremely poor value for money, even reported.

Finally, while the EWLNA road projects produce poor results on cost-benefit analysis, the higher BCRs for the rail projects should be questioned as well. This is because no proper analysis was conducted of whether a new rail tunnel was actually needed to carry the additional rail passengers forecast. This question is discussed in detail in the accompanying paper, 'Does Melbourne Need Another Central City Rail Tunnel?' The paper makes it clear that the real problems are not insufficient investment in infrastructure, but dysfunctional governance and management. An explanation of how these dysfunctional arrangements came about is provided by Kain (2007).

So the most expensive infrastructure investment in Australia's history has been proposed on the basis of analysis that simply would not pass muster in a 'best practice' jurisdiction, while the real problems, which mainly relate to governance, management and planning processes, have been ignored.

Recommendations

Infrastructure Australia would do a great service to the efficiency, sustainability and livability of Australian cities by refusing to accept at face value the funding requests generated by current transport and urban planning regimes and methods. Rigorous analysis of the full range of alternatives, including necessary changes to governance and management arrangements, should be required before any disbursements from the Building Australia fund are authorized. Such an approach would ensure that the overall benefits are maximized, and avoid a repeat of past unwise investment decisions.

References

Eddington, R. (2008): *Investing in transport: Overview of East West Link Needs Assessment*, Melbourne.

Garnaut, R. (2008): *Garnaut Climate Change Review: Final Report*, Cambridge University Press, Melbourne.

GVRD (Greater Vancouver Regional District) (1993) *A Long Range Transportation Plan for Greater Vancouver: Transport 2021 Report*, GVRD, Vancouver.

Kain, P (2007): 'The Pitfalls in Competitive Tendering', in *Competitive Tendering of Rail Services*, European Conference of Ministers of Transport, Paris, 2007, pp. 43-125.

Mees, P. (2007): 'Can Australian cities learn from a 'Great Planning Success'?', *Proceedings of the State of Australian Cities National Conference 2007*, Adelaide.

Meyrick & Associates, Steer Davies Gleave & Econsearch (2008): 'East West Needs Assessment: Economic Benefits and Costs Analysis – Technical Report.' (unpub.)

Sinclair Knight Merz, Maunsell & Evans and Peck (2008): 'East West Needs Study: Transport Supply and Demand (Existing and Future).' (unpub.)

Statistics Canada (2006): *The Time it Takes to Get to Work and Back*, Cat. 89-622-XIE, Statistics Canada, Ottawa.

Statistics Canada (2008): *Place of Work Highlight Tables, 2006 Census*, Cat. 97-561-XWE2006002.