NEW ZEALAND BUSINESS ROUNDTABLE

Submission on *Tackling Congestion in Auckland*, the Auckland Road Pricing Evaluation Study

April 2006

Summary

- This submission on *Tackling Congestion in Auckland*, the Auckland Road Pricing Evaluation Study, March 2006 (ARPES) is made by the New Zealand Business Roundtable (NZBR), an organisation comprising primarily chief executives of major New Zealand business firms. The purpose of the NZBR is to contribute to the development of sound public policies that reflect overall New Zealand interests.
- We welcome the focus on this issue. The quality of life in Auckland, not to mention New Zealand's prosperity, depends on an efficient transport system. Seriously congested roads degrade the quality of life in a community and impair economic growth. They waste time and fuel; increase capital, maintenance and inventory costs; reduce productivity and business competitiveness; allow time-insensitive, low value trips to displace high value time-sensitive trips, including urgent services and the flow of commerce; exacerbate pollution; and increase stress and fatigue.
- Road congestion is currently a serious problem in Auckland. The ARPES endorses an estimate that it is already costing around $750 million pa. It expects the problem to get progressively worse for the foreseeable future under current spending plans, if nothing else is done.
- The ARPES calculates that the benefits from introducing new technologies for billing for congestion would handsomely exceed the costs. This is an important finding. More work needs to be done on how to maximise the net benefits.
- Unfortunately, the ARPES does not attempt to identify effective, let alone efficient, remedies to the congestion problem. It would leave Aucklanders with serious, indeed worse, congestion problems for the foreseeable future under the options canvassed, even at low rates of per capita economic growth. This is not good enough. Aucklanders and New Zealanders deserve better.
- The ARPES's inadequate approach reflects the government's refusal to accept that a transport system based on principles of economic efficiency is necessary for the quality of life in New Zealand, including the achievement of much higher material living standards. The proposals in the ARPES fail to identify the weaknesses in current governance arrangements that have caused the current problems and to identify the investment and pricing decisions that would optimise the value of the road network for the community. Reflecting the subservient role accorded to economic efficiency, congestion charges are seen as a means of generating

additional revenue and suppressing traffic demand rather than as a means of achieving efficient prices and efficient funding of value-enhancing investments. It is misleading to call ARPES a road pricing study.

- The current investment deficiencies, and the failure to assess the most efficient billing arrangements, are symptomatic of the problems with existing institutional/governance arrangements of a political nature that were identified in our 1993 report *Options for the Reform of Roading.* More commercial structures were also proposed in *Better Transport: Better Roads*. Commercial structures would be much more likely to integrate pricing and investment decisions and to see private motorists and commercial users as valued customers, rather than as 'cash cows' that should be forced to use or fund government-subsidised services.

- Subsidies for buses and trains create a conflict of interest for organisations that are also making road capacity investment decisions. Congestion charges eliminate the weak argument for subsidising buses and trains in order to ease congestion. Instead ARPES proposes to use such charges to *increase* such subsidies. The flaws in this thinking are also reflected in the Land Transport Management Act and need to be remedied. Public transport can only make a small contribution to Auckland passenger transport needs and a minimal one to the needs of the freight industry. There is a risk of highly uneconomic public transport investments being made, at a cost of wasted capital and lower regional and national economic growth.

- The NZBR recommends that, as a minimum, the focus of further work should be on identifying the combination of investment and pricing decisions that represent the most efficient response to current and emerging road transport problems. This implies the development of a sixth option (on top of the five canvassed in the report), based on economic efficiency principles, for public scrutiny and debate. We see no reason why annual congestion costs in Auckland of around $750 million need to be accepted. If policy options do not fix serious congestion, they should be discarded.

- We consider that a serious impediment to the adoption of more efficient billing technologies is motorists' justifiable suspicion of the motives of the revenue-raising authorities. By putting revenue generation ahead of efficient pricing and proposing such inefficient ways of spending this revenue, the ARPES will surely heighten this resistance and thereby make it harder to introduce changes. The authorities therefore also need to revisit governance issues in order to find better ways of

convincing motorists that their money will not be squandered for the benefit of fringe or minority interests.

Tackling Congestion in Auckland

1 Introduction

1.1 This submission on *Tackling Congestion in Auckland*, Auckland Road Pricing Evaluation Study, March 2006 (ARPES), is made by the New Zealand Business Roundtable (NZBR), an organisation comprising primarily chief executives of major New Zealand business firms. The purpose of the NZBR is to contribute to the development of sound public policies that reflect overall New Zealand interests.

1.2 In our 1993 report, *Options for the Reform of Roading*, we stressed the need for improved governance arrangements and billing technologies in New Zealand. We subsequently supported the proposals in *Better Transport: Better Roads* because we saw more commercial arrangements as a necessary step towards getting road authorities more focused on providing value for money for road users. This framework informs this submission.

1.3 We welcome the new willingness to consider seriously the introduction of more efficient billing systems. Section 2 summarises what we regard as the key considerations outlined in the ARPES. Section 3 identifies our key concerns with the document's approach. Section 4 makes some concluding comments.

2 Key points in the ARPES

2.1 Congested roads waste time and fuel; reduce productivity and business competitiveness; aggravate pollution; increase stress and fatigue; and more generally degrade the quality of life in a community by creating a thousand and one inconveniences for ordinary daily living. One indicator in the ARPES of the extent of road congestion in Auckland is the number of vehicle kilometres traveled below the speeds at which traffic can flow smoothly.[1] It appears that in 2005 around 16 percent of vehicle kilometres traveled during the 7 am – 9am morning peak period in the Auckland isthmus region were below this speed.[2]

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[1] These critical speeds are 67 km/h on motorways and 35 km/h on local roads. See the ARPES, executive summary, p 5.

[2] The executive summary states on p6 that in 2016 around 20 percent of vehicle kilometers traveled during this period will be in these congested conditions and on p5 that current conditions are probably 20-25 percent less congested than projections for 2016.

2.2 Whatever the measure, there is no dispute that road congestion in Auckland is already imposing major costs. The ARPES cites estimates by Ernst & Young in 1997 that put the annual cost at around $900 million (expressed by the ARPES in 2005 dollars) and a Booz Allen Hamilton report in 2005 that estimated the annual cost in Auckland at $730 million in 2005 dollars. Such costs markedly exceed the costs to citizens in 2005 of Auckland Regional Council rates of $105 million and Auckland City Council rates of $306 million.

2.3 The ARPES does not assess the robustness of these congestion cost estimates, although it does indicate that they do not include the cost of pollution, noise or "community severance". Based on information received, we doubt that the estimates include the costs of inefficient rationing that arise when low value trips displace high value trips.[3] Nor does it comment on the implications of Booz Allen's estimate that the costs of off-peak congestion in Auckland exceed the costs of peak-time congestion.

2.4 The ARPES assumes that Auckland's population will grow at 1.5 percent per annum. It projects that the number of trips in Auckland will rise at about the same rate.[4] As a result, it projects that congestion in Auckland will increase by 20-25 percent to 2016, allowing for substantial planned investments in roads, passenger transport and other measures.[5] This seems low given that time delays from congestion can be expected to rise faster than the rate of growth in traffic densities.

2.5 The ARPES identifies five options that "at best" might reduce morning peak period congestion in 2016 by around 25-30 percent of forecast. This implies that congestion will remain a serious problem through to 2016 and beyond even if income growth in Auckland is only modest (see section 3 below).

2.6 The ARPES estimates that in order to achieve the reduction in projected congestion by 2016 there will be a need to extract in present value terms around $1 billion from road users in 2005 prices.[6] The national resource cost of the

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3 Our consultant was advised that differences in the value of travel time are not taken into account, yet there is great variation in hourly rates of remuneration in the community.

4 See ARPES chapter 1, section 14, p5, from 358,265 trips in 2001 to 446,299 trips in 2016. On the same page the ARPES refers to an increase in traffic demand of "about 1.6 percent per annum".

5 The Auckland Regional Land Transport Strategy assumes funding of $10.7 billion for Auckland transport during the next decade (see ARPES, section 1.4.3, p 8). Appendix 1 of the ARPES indicates at p 23, table 6, that the base case assumes spending in the next decade of $9.2 billion, comprising roads ($5.8 bn), buses & trains ($3.0 bn) and traffic demand management ($0.4 bn).

6 See ARPES, executive summary, table 7, row 5, p 21. The revenue varies from $0.7 billion to $1.3 billion depending on the option.

billing system accounts for less than half of this (see the third row in the table below). The ARPES proposes to spend roughly as much again (see row 10 in the table below) on so-called 'mitigation projects'. Based on the numbers in the table below, these projects would make the community worse off, except in the case of the 'parking option' where the amounts involved are much smaller.

Restatement of Benefit to Cost Ratios in the ARPES, Appendix 19

	Option				
Net present values ($ million)	**Single Cordon**	**Double Cordon**	**Area Charge**	**Strategic Network**	**Parking**
Travel time benefits	929	871	636	196	550
Total benefits	1256	1226	867	337	758
Total costs	359	419	379	483	191
"Traditional" BCR	**3.5**	**2.9**	**2.3**	**0.7**	**4.0**
Totals, including mitigation					
Total cost including mitigation	784	841	701	860	267
Total benefit including public transport fares	1446	1554	1118	395	947
Incremental effects of mitigation projects					
Incremental benefits	190	328	251	58	189
Incremental costs	425	422	322	377	76
Incremental BCRs	**0.4**	**0.8**	**0.8**	**0.2**	**2.5**

3 Commentary on the ARPES report

Inadequate problem definition

3.1 If New Zealand is to prosper, it must have an efficient transport system. The NZBR has advocated moves to adopt more efficient governance arrangements and charging technologies for roads for well over a decade.[7] Although the slow progress towards this goal is frustrating, the NZBR welcomes the willingness in ARPES to consider more efficient pricing mechanisms based on transponders and/or automated number plate recognition cameras.

3.2 Regrettably, the ARPES does not attempt to identify the contribution of supply-side factors to the existing situation. It ignores entirely the contribution of flawed governance arrangements, including divided responsibilities and conflicts of interest with respect to subsidised services, failures to invest rationally and the

[7] Refer to *Options for the Reform of Roading in New Zealand*, June 1993.

unwillingness to assess more efficient pricing structures until now.[8] The evidence of road projects that are not funded at benefit to cost ratios (BCRs) of up to 4:1 points to serious deficiencies in either the information base or funding decisions.

3.3 Instead, the ARPES merely asserts that the "underlying causes of congestion in Auckland, relate to regional growth, geographical and capacity constraints, and a high reliance on cars".[9] There is nothing here to indicate that the road authorities had any obligation to provide the level of services that motorists are prepared to fund.

3.4 Congestion is a manifestation of the problem known as the tragedy of the commons – the overuse of a public resource that arises from inadequately defined property rights. The potential costs to a community of road congestion are enormous. In the extreme form of gridlock, road congestion potentially removes all the benefits a community might hope to derive from its past investments in roads.

3.5 Poor governance arrangements – divided responsibilities, public monopoly and the absence of competition or price discovery mechanisms – are a common source of the inefficient queuing mechanisms often observed in such nationalised industries as health, water, and roads. In contrast, a private operator would have a strong incentive to allocate road space to the most highly valued uses, and to invest in capacity profitably.

Failure to optimise congestion charges and investment in capacity

3.6 An efficient transport system requires *both* efficient rates of investment and efficient prices. They need to be jointly optimised. For example, a country cannot expect to prosper if the only response to sub-optimal investment in road capacity is to raise congestion charges. Conversely, there is a loss of welfare if extra road capacity is added when it would be more efficient to raise congestion charges or improve traffic management in order to defer the capacity-enhancing investment.

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8 Those who can influence road capacity decisions and fund subsidies for buses and trains might be tempted to try to reduce their subsidy payments by finding ways of taxing motorists.

9 See, in particular, paragraphs 18-20 in the executive summary and section 1.4.1.

3.7 ARPES does not attempt a joint optimisation.[10] It fails to emphasise the need to expand capacity when the benefits exceed the costs.[11] Instead of seeking to invest the surplus from congestion projects in socially profitable projects for the benefit of motorists, it proposes to spent them on what it calculates to be socially unprofitable projects for non-motorists. Our consultant has been advised that only around $3.3 billion is planned to be spent on new road construction in Auckland in the next 10 years, representing only about 30 percent of planned land transport regional spending. We were not able to get any satisfactory information about the BCRs of the included $3 billion spending on public transport or the excluded spending of around 50 percent of the regions' identified strategic network improvements.[12]

3.8 Nor does ARPES identify the level of congestion charges that would allow traffic to flow freely, at least along the strategic network.[13] It is not clear, for example why charges should only be levied during morning peaks if congestion costs are greater at other times.

3.9 The absence of any efficiency focus for investing in, and pricing, road capacity appears to reflect a problem with governance arrangements rather than with officials or their consultants. Section 1.5 of the ARPES acknowledges that efficient road building is critical to Auckland's future. Appendix 19 indicates that the 'mitigation' projects were imposed 'from above' at an early stage in the analysis. It states that their scope was "developed prior to the modelling and analysis of the adopted schemes" and that "[in] some cases this may mean that high cost items produce relatively small benefits".

3.10 The justification for these mitigation projects is insubstantial. Appendix 17 explains that they comprise primarily, "improvements" to public transport, financial compensation for "people with disabilities, some specific health users, volunteers, specialist education users, and people involved in transition to work programmes, and improvements to walking and cycling facilities". Improvements that cost more than they are worth are economically unjustified.

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10 For example, in the executive summary footnote 1, p 4, the ARPES weakly observes that the integration of Transit New Zealand's Western Ring Route toll road proposal with the contemplated road pricing scheme "would need careful consideration" .

11 For example, instead of making this obvious point in the executive summary, it irrelevantly states (p 5) that "it is now widely accepted that cities cannot build their way out of congestion in the long-term".

12 See ARPES table 6, appendix 1, p 23.

13 The ARPES does not appear to consider, in particular, the optimal road pricing for the strategic network option.

3.11 It is often argued that a measure that makes the community worse off overall should still be undertaken if it is 'equitable'. Yet it is not obvious why those who travel by bus, walk, or cycle in Auckland should be subsidised relative to those who (1) use Auckland's roads in other ways, (2) travel by bus, walk or cycle in other cities in New Zealand, or (3) are poor in New Zealand or other countries. “Improvements” to walking or cycling facilities or public transport do not obviously benefit the poor relative to the well-off. For a start, the commuters who use buses commonly have jobs and probably can afford to live close to bus routes. The ARPES is incoherent on this point. For example, its summary document argues:

> Where charges account for a comparatively high portion of household income and realistic alternatives to using a private motor vehicle are not available, adverse social impacts could occur.

Why then reject the option of spending excess revenues on high-return capacity-enhancing projects that will benefit such motorists?

The conflict between charging for congestion and subsidising buses

3.12 Optimal congestion charges eliminate the 'second-best' justification for subsidies for buses and trains as a means of reducing congestion. All road vehicles, including buses, would pay congestion charges that were based on their road space requirements rather than the number of occupants. The emptier the vehicle, the greater the effective charge per occupant. The artificial constructs that the ARPES embraces – that buses and trains transport the public while taxis and private cars do not, and that the disabled are better to use buses rather than taxis – should disappear from the analysis of transport issues.

3.13 The common slogan that motorists should bear the full cost of their road transport decisions is not a guide to efficient pricing. Because space is limited, buses, pedestrian crossings and cyclists also impose costs on motorists. Who then should pay for bus lanes or pedestrian crossings? Such slogans throw little light on the question of the most efficient means of pricing roads or funding road services.

Projections inconsistent with economic growth aspirations

3.14 The assumptions for economic growth underlying the ARPES appear to be inconsistent with the government's goals for faster economic growth. A meaningful timeframe to close the gap between average living standards in New Zealand and overseas countries such as Australia is likely to require trend income per capita growth of at least 2.5 percent per annum. Growth of this order is realistic and was broadly achieved in the decade to 2003. However, a study by Hyder Consulting that is part of the ARPES projects that the value of travel time in Auckland will rise at only 1.1 percent per annum between 2001 and 2021. It also assumes that the value of time has an income elasticity of 0.8 with respect to the growth in GDP per capita. Together these assumptions suggest that the base case has a growth in Auckland's GDP per capita of only 1.3 percent per annum through to 2021.[14] At this rate of increase, Aucklanders' standards of living can be expected to decline sharply relative to the OECD average and relative to Australia in particular. Such assumptions are inconsistent with the government's goals and should be changed.

3.15 Assuming that traffic demand rises with per capita income growth as well as with population growth, this calculation raises a question as to whether the base case in the ARPES underestimates the latent traffic demand growth in Auckland and therefore future congestion. In its defence, the ARPES observes that Auckland's per capita real GDP grew by 1.1 percent per annum in the five years to 2002-03 against a New Zealand average growth rate of 2.3 percent per annum.[15] However, this is too short a period to establish a trend relationship between economic growth in the Auckland region and either Auckland traffic volume growth or national economic growth. Greater transparency about these matters might require further work to be done on these relationships.

The problem of motorists' resistance to new billing systems

3.16 Motorists correctly perceive that politicians like additional sources of revenue for discretionary spending. These perceptions can only be heightened by the statement in the ARPES that one of its goals is to increase revenue and by the absence of evidence that any of the associated discretionary spending will

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14 Hyder Consulting, in association with David Young consulting, *Auckland Road Pricing Evaluation Study: Transport Modelling Approach and Model Functionality*, Final Report, 7 March 2006, p 51.

15 ARPES, section 7.2, p 3.

provide net benefits to motorists.

3.17 The focus of policy development should not be on revenue raising and traffic demand suppression but on economic efficiency, including efficient pricing and investment decisions. None of the five policy options in the report has this focus. New billing technologies have the potential to substantially improve motorists' welfare. Indeed, the potential gains in motorists' welfare could be appreciably greater than estimated if the congestion charges were optimised and excess revenues were used more efficiently, for example to reduce reliance on less efficient forms of charging.

4 Concluding comments

4.1 Regrettably, the apparent effect of the proposals in the ARPES, if not their purpose, is to extract around $1 billion in present value terms from private motorists, at a real resource cost of around $0.4 billion, largely in billing expenses,[16] in order to help fund up to $0.4 billion worth of ill-justified and presumably politically motivated 'mitigation' projects.[17] It is a clear signal from the relevant roading authorities that private road users are regarded as cash cows to be fleeced for the benefit of politicians and minority interests.

4.2 Governments cannot achieve important community benefits if they cannot make credible commitments to preserve promised benefits. Governance arrangements that make it harder for politicians to fleece motorists and squander their money on poor quality projects would make it easier to achieve more efficient billing arrangements. This should be the priority task of roading reform. The proposals in *Better Transport: Better Roads* went some way to addressing this issue.

4.3 In addition, the current proposals should be amended to eliminate unjustified spending proposals and to focus on efficient pricing and investment arrangements. In other words, a sixth option, based on principles of economic efficiency, should be analysed and exposed for public scrutiny. To the degree that additional revenues exceed the availability of socially profitable road-related projects, consideration should be given to reducing other charges on road users.

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[16] See ARPES, appendix 19, table second last page, row 3. The range is from $0.2 billion to $0.5 billion depending on the option.

[17] See also ARPES, appendix 19, table last page, row 3. The range is from $0.1 billion to $0.4 billion depending on the option. These incremental costs are shown in the table on p 3 of this submission.