



## *Town and Country Planning Association*

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### **Submission to the Victorian Competition and Efficiency Commission Inquiry into MANAGING TRANSPORT CONGESTION (December 2005)**

As of 13 December 2005 there are many excellent submissions posted on the Inquiry's web site. The posted submissions are comprehensive and provide a worldwide view. We have therefore chosen to reinforce a few issues relevant to managing transportation congestion in Australian cities:

1. Mobility defined? Policy makers must distinguish between congestion and accessibility/mobility. This distinction is vital in focussing on the full issue. A focus on 'transport congestion' as the problem increases the risk of seeing the solution narrowly, i.e. the transport system is optimised when congestion is eliminated or reduced to an acceptable quantitative measure.
2. Cause-and effect relationships in transport system performance. Policy makers should ascertain the cause-and-effect relationships between the measures of road and other transport systems' capabilities and performance. The main issue here is that use of Australia's urban roads is *relatively under-priced*, and when the "dollar-equivalent cost" of travel time is factored in, travel along the large majority of O-D travel "lines of desire" by private car is perceived to be much cheaper (by about \$1 - \$1.50 per km) than the public transport alternatives. Dollar-equivalent time costs have been developed by/for government transport administrations using consumer marginal utility research.
3. Value of transport. It is most important to define and then evaluate the comprehensive set of measures of 'value' and thus *value-creation* and *value-addition* in transport. Obviously by sector of usage (freight, passenger), attributes of the transport service or function (e.g. \$ cost to users and funders, transit time [mobility], time reliability, psychological attributes, negative and positive externalities) that are seen by stakeholders (including users) as providing both positive and negative value. VCEC's issues paper uses the unit of travel time as a *measure of congestion*.
4. Strategic goals: scope beyond congestion. Following from the above points, a road transportation pricing system should be much broader in application than congestion pricing alone. What *outcomes* does a government want to achieve? Road pricing schemes must, amongst other attributes or capabilities, seek to manage (implicitly to reduce) demand to improve measures of sustainability and value to stakeholders, and be equitable. The goals of road and other transport modes' pricing must be comprehensive, with time horizons similar to or beyond the infrastructure lifecycles. One sub-set of these goals must be a major and sustainable shift in personal travel from private cars to public transport and non-motorised travel.
5. Equity. The need for equity of outcomes also requires any road-pricing scheme or system (RPS) to hypothecate its revenues to improved and more sustainable transport networks and strategically desired nodes of land-use consolidation.
6. Activity dispersal. From the last two points above, road pricing schemes must comprehend desired outcomes for the integration and optimisation of land-use and transport. In particular, congestion pricing should avoid "centrifuging" or dispersing land-use activity to areas of travel

hitherto uncongested, which usually means the fringe areas.

7. Risk strategy in planning. The issue of sustainability leads directly to the interdependencies of the land-settlement and use patterns with the transportation system, which in turn is vulnerable to unprecedented threats. At the forefront of threats are the mooted peaking of crude oil production that would lead to higher-priced substitute hydrocarbon fuels (from oil shale, tar sands, stranded gas and biomass), and the climate change constraint on hydrocarbon-powered transport. These two threats are likely to heighten the risk to transportation planning and management over the next 2 to 3 decades. In Victoria, they have been neglected, e.g. what is the justification for the goal of 20% personal travel modal share by public transport as stated in Melbourne [transport] 2020? Why not a higher modal share? Why not a lower modal share?

## **About the TCPA**

The Town and Country Planning Association's purpose is to advocate environmental planning of land use for ecological sustainability via effective strategic planning frameworks. The TCPA is a non-profit public organisation, established in Victoria in 1914, and is independent of any party political organisation.

## **Further discussion of issues**

### **1. Mobility defined? Mobility versus Congestion**

"Congestion" has negative connotations. A more positive discussion would be about how to facilitate friendly, safe and economic **mobility and accessibility**.

Variables determining transport network capacity, including optimum operation, are well established by the transport planning profession. The system will operate below its highest possible capacity when it becomes overloaded. Prevention of overload is a key objective in managing the existing transport system.

Whether "the amount of congestion" is quantified by travel time, density and continuity of vehicle flow, or pollution generation, or a combination of all three, there is no doubt that congestion is regarded as an undesirable condition of cities.

Mobility is expedition of travel. Traditional transportation planning paradigms attempt to maximise mobility for the largest transport market "channel", i.e. mode, with infrastructure, i.e. by building large roads. Access(ibility) seeks to maximise access to transport for all people, not just the fit and affluent who naturally aspire to car use. Accessibility stresses multi-modality, rather than just the largest mode.

### **3. Value of transport – setting priorities**

Any discussion about congestion, or any other performance attribute of transport systems, calls into question the prior task of defining appropriate and comprehensive Key Performance Indicators.

The issues paper avoids the word "value". In particular, the issue of *the value of time* is not discussed. The issues paper uses the unit of time as a *measure of congestion*, but does not comprehend that travel time carries widely varying *costs* (\$ and otherwise) and *value* to the traveller according to purpose of the trip (vehicle movement). This is true for both freight and personal transport. The value of travel time - and distance - spent in the logistics freight chain are very different to those delaying an emergency vehicle, a road-borne commercial service provider, or a commuter, or someone pursuing recreational or social activities.

The emerging paradigm of “triple bottom line” optimisation (i.e. including environmental and resource-use sustainability) in infrastructure investment decision-making, forces the prioritising of improvements in mobility of different classes of road vehicle movement according to the unit value and cost of the trip’s outcome. Thus, shortening the commuter or leisure travel time in a vehicle at nearly \$10 per hour, should be accorded a much lower priority than shortening business trip and freight cartage time valued at close to \$30 per hour or higher. The investment decisions to improve mobility and accessibility need to be based on widely accepted community values to enable net social, environmental and economic benefits to be demonstrated.

The TCPA suspects that there is less scope than many congestion-pricing advocates assume, to drive changes in the temporal pattern of travel by penalty-pricing congestion. Given the varying levels of travel value, and that most peak congestion time travel occurs then because it has to, it is arguable that the degree of freedom to modify personal travel demand lies in modal substitution or else demand destruction (in use of Internet, etc). For road freight, the main degree of freedom in transport demand would probably be spatial, via provision of freight-priority arterial roads and individual lanes in roads, in the manner of bus/tram priority lanes.

Increases in the efficiency of freight movement would make a greater contribution to the primary economic and environmental well being of Victoria than reduction of non-business personal travel time.

Interestingly, the average number of weekday shopping and service trips is of the same order of magnitude as the number of trips to/from work. The total peak travel trip numbers generated on a Saturday are similar to those on a weekday. The personal trip approximations are derived from VATS 1994-2002.

Road freight spatial-temporal activity modelling results should be used in decision making in transport planning.

#### **4. Strategic goals: scope beyond congestion**

Another view is that both transport "demand" ("stick") and "supply" ("carrot") strategies must together be brought to bear in reducing congestion whilst improving the mobility of valuable travel.

A term like 'valuable travel' implies that transport network usage varies according to its monetary value or "return on investment", its environmental and social impacts and social well-being. The obvious case in point is where road network capacity and travel speeds are improved via major arterial road construction, which triggers more travel demand (largely via migration of land uses to the new road corridor), which leads to renewed congestion and reduced quality of access.

Road pricing revenue should be devoted not to additional road capacity, but to

- (i) improved and expedited mass transit and safer cycling infrastructure;
- (ii) rectification of bottlenecks (e.g. rail crossings), which create traffic delays/build-ups;
- (iii) improving speed and reliability of road-based public transport, and
- (iv) rail and road freight infrastructure

as leading priorities.

It would be very useful to know what is the contribution of short trips to congestion on freeways and main arterials.

Specific desirable components in the “goal list” worthy of consideration include:

- Use Electronic Road Pricing (ERP) to separate freight trucks and passenger cars into different lanes by price-driven preference, with mobility priority for emergency, PT and freight vehicles. (See point (iii) above)

- Set up several road-rail freight terminals in metro Melbourne (Refer to App. B 'Public Logistics Terminal' in Raptour's submission to current inquiry), and evaluate as high priority strategic standard-gauge single-track links from Dandenong-Gippsland, and from Hastings. The goal here would be to reduce heavy, long-haul road truck movement through the metropolitan area, where these consignments are scheduled to be transferred to interstate rail haulage. These standard-gauge lines could be located within existing rail corridors (Melbourne-Dandenong and from Hastings via Frankston thence along Eastlink to Dandenong line) as separate tracks or as dual gauging of a "third" broad gauge track. There is the issue of whether it is still feasible to run a standard gauge line under Federation Square through Flinders Street or via the Richmond-Clifton Hill-West Melbourne "old inner circle" railway easement to Dynon Road.
- Road pricing transponders to be installed in all vehicles, to be paid for by vehicle "occupier" (owner/user). The rationale here would be to transfer certain fixed motoring charges to variable per-metre charges, to familiarise the public with the technology (and reduce political opposition), and to develop and field test anti-fraud security technology.
- Interoperability of ERP systems throughout Australia (still an unresolved issue in the EC. Very important for long-haul trucking). Need for "open architecture" in IT systems to be employed

## 5. Equity of outcomes.

Public transport, insofar that it is taxpayer subsidised, is notoriously regressively inequitable in the pattern of its service delivery. The issue of transport-rich, affluent inner suburbs is well understood. Any road pricing regime, including congestion pricing, must minimise the extent to which its operation causes much loss or gain to individual entities, other than rewarding those who use cars less, and either reduce their physical travel or/and switch to use of public transport, walking and cycling.

In introducing a road pricing scheme or system (RPS), it is important to hypothecate all new revenues raised to the government or operator, be returned as tangible benefits to the transport system users. Benefits would include reduced transport infrastructure congestion, improved travel times, lowered freight vehicle running costs (other than the road or rail pricing), improved public transport and cycling networks, road infrastructure, enhanced district centres, improved ambience of living environments, and cross-subsidies of transport-disadvantaged communities. There is scope to make variable certain vehicle-use changes that are currently fixed, e.g. registration, TAC insurance, vehicle insurance (a strategy of the Netherlands' 'Mobimiles' RPS proposed in 1999), and substitute fuel excise with a de facto fuel-use cost via the RPS platform.

Road pricing of non-freight/commercial vehicles must be accompanied by targeted investment in mass transit to reduce passenger vehicle traffic on main arterials/freeway routes which should be served by fast and efficient fixed line or Smartbus mass transit. A proper social- equity model should involve directing RPS revenues to transport-poor areas where individuals have little choice but use private vehicles. This regional re-direction of revenues could be taken up in development of expanded public transport, and/or in substituting for property rates in funding municipal councils.

Road pricing of passenger vehicle traffic should be progressively rated to penalise more heavily short trips in the inner city, which is well served by mass transit: e.g. Port Phillip residents who still drive a car into the CBD for work trips. That is, one dimension of the RPS \$ charge would be predicated on the quality of access of travel options via existing public transport in a given precinct.

## 6. Activity dispersal vs. Strong Central Integrated Transport and Land-Use Planning

The TCPA advocates improving mobility by the best allocation of road and rail corridor space.

Freight, private and public transport vehicles are users of road and rail network space. Long-term sustainable mobility requires some re-allocation of priorities.

Realistically, this can only be achieved through a Treasury-based central integrated land use and transport agency, the charter for which balances, social, environmental, and economic outcomes.

The mission and vision of the agency should be to improve mobility and accessibility for all.

Land-use and transport infrastructure policies must always be aligned. This will entail integration of urban land-use planning and transportation governance, with continuous re-alignment between state and local government authorities. No road-pricing regime that aims to promote public transport usage will work without a close physical intertwining of land-use sites with public transport access nodes. The Netherlands' ABC land-use and transport planning approach could well be adapted for Victorian urban conditions.

Clearly, this discipline is breaking down in the governance strategy of Melbourne 2030 that has failed to address the land-banking sector, and with segregation of operations of major motorway PPP projects (CityLink and EastLink), with respect to pricing and other travel demand controls, from the rest of the road and transport system.

Yours faithfully,  
(Signed)

David Wilson,  
Hon. Secretary,  
Town and Country Planning Association

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