Submission to the Ministerial Inquiry into Public Passenger Transport

Prepared by: Eco Transit Sydney
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Authorised by the Executive Committee of Eco Transit Sydney

Submission consists of:
22 page response to several of the terms of reference
3 Documents attachments as related materials

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RELATED MATERIALS REFERRED TO IN SUBMISSION

'The macroeconomic structure of cities:
indicators for sustainable urban infrastructure development',
Regional Cycles: regional economy towards sustainability,
Leipzig, 1 November 2002.
Zeibots, M.E. 2002.

'Before and after opening of the M4 Motorway from Mays Hill to Prospect:
Sydney case studies in induced traffic growth'
ISF Working Paper
Zeibots, M.E. 2003.

'Urban roads. A health asset'
Paper prepared for Royal Australian Planning Institute (NSW) Conference, May 2001.
Mason, C. and Bargwanna, S. (2001)

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Introduction to Eco Transit and Eco Transit Sydney

What is Eco Transit?

EcoTransit is transport that supports a sustainable economy and environment. The less resources used by the transport sector, the more efficient our economy is and the less damage is done to the environment. Public transport, walking and cycling fits these criteria! Urban freeway development that entrenches prolific car use does not .

(**see attachment 1** -The macroeconomic structure of cities: indicators for sustainable urban infrastructure development)

EcoTransit Sydney is a public transport advocacy group operating out of Sydney. We are a not-for profit organisation dedicated to the promotion of EcoTransit development. We advocate improving Sydney's local environment by shifting transport from invasive modes like the private motor car that produce high levels of air, noise and water pollution, to the less-polluting public transport modes. We are also dedicated to the preservation of Sydney's natural environment and heritage areas.

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Overview

The terms of this inquiry cite a State Government commitment to safety and reliability in providing public transport, presenting $1 billion as the cost, to government, of the current system. However, a safe and reliable public transport system must be assessed not just in terms of cost, but in terms of the benefits that come from its use. Likewise, the health, amenity and individual financial costs of private transport must be counted to provide a holistic planning environment. The benefits to the public of Public Transport, and the costs in terms of health, amenity and income that are attributable to private transport alternatives are said to be 'intangible' to a government accountant, but they are very real to the millions of individuals who are affected

Ecotransit Sydney recognises that private transport systems cost the community in its entirety, through lessened amenity, health issues associated with poor air/water quality and increasing rates of obesity related disease through car dependence. (**see attachment 3** – Urban Roads: a health asset) Accordingly, our submission rejects the notion that patrons of the public transport system are its only beneficiaries, making it inappropriate to burden those who make a responsible and sustainable transport decision, with the cost of running the public transport system.

We believe that private transport is incapable of adequately supporting the populations of cities like Sydney in a clean and efficient manner, and that the necessity of a mass transit system should be recognised by the allocation of resources which provide an appropriate levels of safety, reliability and *availability*.

It is clear that the moves to curb Sydney's sprawl, with the resultant emphasis on high-density development within the current boundaries of Sydney, will be placing greater and greater pressures on open spaces, roads and public transport. It is not clear that good, long-term, decisions are being made with regard to providing clean, efficient and accessible transport for this proposed high-density development, although we do applaud the recent decision to place transport and urban planning under the same department.

Ecotransit Sydney believes that the case has been made for the realities of induced traffic growth (**see attachment 2 -** Before and after opening of the M4 Motorway from Mays Hill to Prospect: Sydney case studies in induced traffic growth). If you build more and bigger roads and more people will drive. Similarly it is our position that more investment in public transport will bring people to a mode which is less costly to the entire community.

Eco Transit Sydney would like to take this opportunity to advise against the current strategy of allowing private sector developers to foot the cost of road infrastructure. As a profit-making activity, it is an increasingly problematic proposition. In real terms it is only the government that saves money on these initiatives – the public continues to pay for these roads for many years.

It should also be noted that current attempts at global economic re-structuring are providing opportunities to pass more power to the companies that are building these roads. Public transport is in competition with large corporations with an interest in seeing as many people on their toll roads as can be arranged. This kind of unfair 'competition' is now under scrutiny in agreements

such as the USFTA and the proposed changes to the General Agreement on Trade in Services. Put simply Government at all levels must see the peril in allowing essential infrastructure to become subject to market interests that can put access to such infrastructure beyond the reach of some members of the community.

For these and many other reasons, it is our understanding that responsible infrastructure design should not be based in the short term. Despite the fact the Action Plan For Transport 2010 has foundered for the most part, the timeframe of 12 or more years is a valuable starting point. It is our view that it is duty of government to lead in the direction that will achieve good social, health and economic indicators, Efficient, reliable and sustainable public transport can deliver this outcome.

Given the above, and in the light of concerns about the standard of service being provided currently by the public transport system, Eco Transit Sydney submits the following recommendations in response to the terms of the enquiry.

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The likely future needs of CityRail and STA Bus and Ferry operations, with regard to efficient operating and capital costs;

Resources must be made available on the assumption that the future of transport will *not* be private cars. For a number of reasons, ranging from the lack of affordable fuel as supply estimates become alarming within ten years, to the basic incompatibility of good air and water quality with operating millions of cars in the Sydney area.

When deciding what kind of transport system it is possible to run, the physical state of the infrastructure has to be taken into account. For rail this includes the number of tracks, the speed at which trains can safely travel on the tracks, the condition of the switches (or the crossing points between tracks), the capability of the signalling system and the types of carriages or 'rolling stock'. These all contribute to what is and isn't possible.

Increasing the frequency of services is the key element to a good public transport service. The mode that people choose to use is fundamentally determined by which mode is the quickest and the most convenient. If a person misses the train by just five minutes, for example, and the service is only running at a half hourly frequency, there is a wait of 25 minutes for the next train. This makes rail travel less attractive and is the reason many people use the car.

City Rail

What's wrong with the current rail system?

Our current rail system is in desperate need of upgrading to meet current and future demand.

- **Signal System**

  Despite re-signalling & associated upgrading of infrastructure over the past two decades, the signalling system is outdated and in need of replacement.

- **Travel times are longer than necessary**

  Platform procedures need streamlining, possibly with crowd control barriers at busy stations, such as the City Circle. Services are unreliable as trains run late and out of order, especially in inclement weather. Loading times indicate inappropriate choice of rolling stock.

- **The level of passenger comfort is low**

  People making sustainable transport choices are being penalised by a public transport system which does not offer much reward beyond kudos, and doesn't fully meet their immediate needs.

- **Capacity Over-reached**

  Tracks need to be duplicated (or in some cases, quadruplicated) in certain high-capacity sections. This will also reduce the conflict between suburban, country and freight movements. Other modes need to be considered such as light rail in areas which justify a low intensive rail service without the capital expenditure and land acquisition required for heavy rail.

How can this be addressed?

Allocate Resources for Upgrading the Signalling System

Signalling blocks are about keeping a safe distance between trains and junctions. The existing outdated signal system only allows a small number of trains to be run on any given section of track - one train in every 'signal block'. These vary in length from several hundred metres to several kilometres. At present signals operators only know when a train is located somewhere within a given signal block - the train could be anywhere within that block. This is why only one train at a time can be allowed to enter each signal block. If the signals happen to be widely spaced the system is less responsive.

This means carrying capacities and service frequencies are lower than they could be. Modern signalling systems used on many networks in Western Europe would overcome this problem.

Modern systems have sensors located on the tracks at 200 metre intervals. When a train passes over these, it sends a signal back to the control station giving the precise location of the train. Our existing system does not do this. Additionally, use of ‘Moving block’ technology rather than the fixed block system, would enable safe distances to be adjusted to train position and speed and therefore achieve higher capacity.

Our signalling system is inefficient, and its also less safe than it could be. If signal operators know the exact location of trains, the risk of accidents is reduced. Better signalling and use of

sensors will also be useful in reducing the impact of rare but reputation damaging rail accidents.

Regularly spaced sensor equipment within signal blocks would have the following benefits:

- supervisors are able to monitor the progress of trains far more clearly;
- trains passing through the sensors at unusual speeds can be more easily seen and action taken;
- terrain and speed are more clearly defined with the result that trouble can be spotted earlier;
- determining the position of a derailed train is much easier, facilitating faster emergency response.

Recommendations:

Upgrade signalling systems to modern standards

- Incorporate sensors into signalling system
- Implement more regular signal blocks and/or move to 'moving block' system.

Increasing the Frequency of Services

In the case of heavy rail the timetable is of central importance. The number of trains in the schedule determines how many people can comfortably use the service. The frequency of trains determines how long waiting times will be for commuters. A range of stopping patterns for services determines how trips can be distributed along the trunk route so that travel times for individuals can be made quicker. This is important because if all trains stopped at all stations, travel times for everyone would be slow. The stopping pattern also needs to be simple and follow a regular pattern.

In many western European cities a form of service co-ordination called 'pulse time-tabling' has been introduced. It works like this: a transport planner looks at the structure of the trunk route network and identifies stations where services from several different directions can all arrive at the same. The timetables of the feeder services are then co-ordinated so that they arrive at, say, two minutes before connecting trains depart and leaves say, two minutes after. Transfer times, or the period of time you have to wait between the services, is kept to an absolute minimum.

Trunk route timetable functions can also be used to reduce transfer times with 'feeder services'. Feeder services are public transport links that move people over short distances to connect with the trunk routes that move them over longer distances. These are often served by buses and ferries and carry smaller volumes of traffic. A good heavy rail timetable will be scheduled so that transfer times between the bus and train services are kept to a minimum, making public transport even more attractive.

Recommendations:

At the very minimum -

- Extensive review of patronage on all CityRail lines to ensure efficient usage of carriages (minimum "dead running" – eight-cars used on services requiring only four or six);
- Review all peak hour express, limited stops & all-stations services to ensure capacity is where it's needed;
- Review platform procedures with regard to efficiency;
- Implement resource allocation to ensure that all passengers who are present for a particular service timeslot can be accommodated preferably at less than 'crush' capacity;
- Continued monitoring and formulation of strategies to attract more commuters.
- Commitment to creating broad planning processes which include private operators
- Introduction of pulse time-tabling
- Acquire and utilise appropriate stock for off-peak and peak periods.

To attract maximum users to public transport -

- Commitment to services that are sufficiently frequent that timetables are unnecessary (ideally 7- 8 minute frequency periods);
- Commitment to integrated fares across private and public public transport for seamless payment processes facilitated by the 'smart card' system.
- Incorporate pulse time-tabling

Increasing Capacity

If we are to make public transport efficient and cost effective, is not good management to allow members of the public or 'customers' wait for the next scheduled service due to a lack of capacity. The choice is between significant upgrades to the heavy rail system and/or reassessment of current public transport modes. We feel that light rail should be considered as a more appropriate solution to inner urban transport issues than noisy, polluting and low-capacity buses, or the more costly, noisy, and land-intensive heavy-rail.

Duplication of Tracks and/or better signalling and time tabling

We will use the Illawarra Line as an example, for both the cost effectiveness of signal system upgrade and the effectiveness in better signalling for avoiding expensive duplication of the entire line. Estimates for upgrading the signalling system on the entire Illawarra Line (that's the entire track from Bondi Junction to Bomaderry just north of Nowra) have been put at $45m. This is real value for money as far as transport goes, having the potential to dramatically improve rail services for the entire southern sector of the Sydney Metropolitan Area—an area with a population in excess of half a million. To put this cost in perspective, the Woronora Bridge—a small section of motorway—cost just under $50m. If, for example, a high capacity signalling system were introduced and an appropriate timetable developed, it may be possible to avoid the high cost of duplicating *all* the single track sections. It may only be necessary to duplicate some small sections. This is an important point because the NSW Rail Infrastructure Corporation (RIC) has estimated that it would cost $85million to double the rail track at Kirrawee and Caringbah (Leader, 3.5.2001). This is a big cost and suggests that upgrading will not be possible.

Consideration of other public transport modes

Sydney's Tram system moved 860,000 people a day back in the 1930's.

The Lilyfield extension to the light rail running in the Sydney CBD has proved highly successful in spite of feasibility studies that determined that this extension was not economically viable. Patronage continues to grow and passengers have been vocal in their praise of the service. Investment in Light Rail has proved highly successful in the case of the extension through Lilyfield and the fact that this investment has been from the private sector should be proof of its potential for cost effective running.

The reintroduction of modern trams would improve reliability because light rail vehicles have a much greater capacity. For example, an average bus has a safe carrying capacity of around 50 people. A modern light rail vehicle has a carrying capacity of 200. And because modern light rail vehicles have a conductor on board, boarding and entry are much quicker. A conductor can sell tickets, provide the correct change and answer any questions while vehicles are in motion. This makes it easier for operators to keep services running to schedule.

Due to its fixed alignments, light rail achieves a better integration with other road users such as cyclists and pedestrians, increasing the opportunities for sustainable modes of private transport and further reducing the strain on roads, public transport and environmental amenity for residents and businesses.

Light rail vehicles are quiet, non-polluting, and they would reduce the impact of traffic on businesses and residential developments on roads that have become arterial wastelands. Light rail services using rolling stock like the variotrams in Sydney's CBD, could be the saving grace of formerly prosperous business areas such as Parramatta Rd (between Lewisham and the City). It would raise the amenity of areas like King St in Newtown, Norton Street in Leichhardt or Randwick to an outstanding level, and reduce parking conflicts with residents.

Recommendations:

- That the appropriateness of current public transport modes be assessed in terms of capacity, amenity and efficiency;
- That duplication needs be assessed and resourced with regard to future requirements and current deficiencies;
- That light rail be considered as a means of increasing the capacity of public transport in the central suburbs Sydney (to 30kms from the CBD)due to its greater capacity and amenity.

Reward Sustainable Transport Choices with Safe, Secure and Comfortable Rolling Stock

- **Upgrade and Standardise Rolling Stock**

The majority of the suburban & inter-city electric rolling stock currently in use by City Rail will approach the end of their economic lives in the next five to ten years. This especially applies to stainless-steel cars built between 1972 and 1982.

These car types are not air-conditioned, do not offer a level of comfort and personal security that is expected by the general public, and will begin to show the effects of structural fatigue.

The issue of comfort and personal security is a major factor in dissuading people from using public transport for commuting purposes. In addition, the diverse number of carriage types and complicates maintenance procedures, as different stocks of spare parts must be carried for different car types. This has especially been the case for the ageing Tulloch trailers (nos. T4799-4895), which at an average age of thirty-eight years, are now overdue for replacement, with many of these cars suffering severe electrolysis corrosion.

Recommendations:

Rationalise rolling stock types to maintain interchange-ability of parts:

- increase orders for Millennium trains to phase out all non air-conditioned suburban rolling stock built by Tullochs (already life expired at 38 years), and Commonweath Eng and Goninan built between 1972 and 1982 (which will reach life expiry by 2007).
- This will leave Goninan air-conditioned cars (marshalled as K-sets with camshaft controls) and Chopper (C sets), Tangara and Millennium trains (all chopper control) in the suburban fleet with an average age not exceeding 25 years as at 31 December 2003.

Institute a ten year program to update rolling stock to acceptable standard

A five to ten year programme should be implemented to expand the order of intercity cars placed with United Goninan, enabling the inter-city fleet to be rationalised to Chopper-control cars only.

The second-series camshaft-control cars (DCM, DIM & DIT car types) should be subject to a ten year phasing-out process. As it stands, the first-series cars built in 1970 have passed thirty years in revenue service and will reach life-expiry in 2005. These cars will soon face issues of structural fatigue, and no longer offer a level of comfort expected by today's commuters. The above will ensure interchangeable rolling stock parts across the board, and maintain an inter-city fleet with an average age not exceeding 25 years as at 31 December 2004.

Acquire single-deck mass-transit rolling stock,with an even balance between seating and standing space.

Loading times could be increased if more frequent services utilising single deck rolling stock was introduced. Capacity is often lost due to patrons clogging the vestibules of double deck carriages, preventing others from accessing seats in upper and lower decks.
Such rolling stock would be particularly suitable for the Airport Link, which has been highly criticised for inappropriate use of double-deck rolling stock, which also lacks luggage space.

This rolling stock should have parts & fittings interchangeable with the Millennium train to reduce the effect of introducing another car type into the City Rail fleet.

STA Bus

Making the most of our rail services doesn't stop at increasing the number of trains in peak hour. Good public transport that gets people to the station is just as important as the quality of the rail services from the stations. The two must be co-ordinated so that a comprehensive network is created and transfer times between bus and rail services are fast.

If the timetable can be arranged so that trains arriving from each direction stop at a station at roughly the same time, it becomes possible for larger numbers of people to be moved through the local area with a smaller number of feeder vehicles. This enables everyone to make better use of public transport because the same feeder service is able to pick up passengers from both directions. If the number of people using feeder services increases running these services at high frequencies-like 15 or 20 minutes instead of 30-becomes more feasible from an operators perspective.

By increasing the frequency of rail services, an opportunity is created to also increase the frequency of bus services. If more people are attracted to rail, then more will also be attracted to higher quality feeder services.

More frequent feeder services means more local public transport use

Most train stations sit at the heart of town centres. If feeder services to rail stations are running at 15 minute frequencies, they not only become more attractive to long distance rail commuters wanting to access the heavy rail network, but also to local people wanting to access their local

town centre. By increasing frequencies, waiting times are cut in half so that using public transport for local trips becomes more attractive. This presents real opportunities for reducing car dependency and traffic congestion for local trips-but this is usually only achieved in combination with improving services for long distance trips. It may not be possible to do this for every station along a trunk route, but it is usually possible to do this for major centres spaced at regular intervals along the line.

The other part of the solution is to **vastly improve the quality of bus feeder services.** Here again service frequencies need to be increased. Services also need to be co-ordinated with trains arriving and departing at key hubs along the line. Improved services on the rail network will create a domino effect and lead to improvements to bus services.

Recommendations:

- Investment in shelter at interchanges so that people don't get wet if it is raining.
- Investment in design and display of route information - easy to understand and high quality maps need to be provided showing where services go.
- Introduction of pulse time-tabling

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Funding options

- **Road Funding Break-Up to reflect prioritisation of Public Transport**

A certain percentage of annual road funding diverted to rail and other mass transit links on the basis that extra public transport usage eases road conditions & congestion. Increased use of reliable and convenient public transport will have impacts on other areas such as health and police/traffic personnel which will free up spending in those areas.

- **Commercial Road-Use Licensing**

Rather than allowing private sector to invest and make money from building roads, we should be receiving some kind of compensation for their preference in using heavy road freight as opposed to rail. Higher taxes on Commercial Road freight over and above a certain tonnage could be worthwhile. Large trucks take quite a toll on city roads This use should attract a fee of some kind to discourage large-scale commercial overuse of a public resource.

- **Tax Parking**

Place a sustainability tax on properties that are commercially operated parking facilities, or impose a tax on parking directly which would then be collected from these operators. This will increase parking charges and be a disincentive to taking a car unless absolutely necessary. Dispensations could be made available to tradespersons requiring a vehicle for work and users of flexi-car programs who are essentially carpooling.

- **Charge a toll for private motor vehicles carrying less than 4 persons into the CBD**

This will encourage car-pooling and make motorists accountable for an inefficient trip. Perhaps the toll for private vehicles (less than 4 pax) could be introduced in conjunction with an expansion of 24 hr Transit Lanes in the CBD to prohibit private car/through traffic use.

Options for enhancing the optimum use of public passenger transport relative to other transport modes;

Make public passenger transport convenient and reliable by:

- increased frequency of services such that people can walk down to the station, ferry or bus stop and be assured of a suitable service within 10 minutes at the maximum;
- ensuring track maintenance is done between 12pm and 4am;
- seamless payment through smart cards that facilitate an integrated fare structure across public and private systems;
- Co-ordinating across public transport modes both publicly funded and private operators to ensure better transfer times.

In Conclusion:

Eco Transit Sydney supports the commitment of the state government to efficient, safe and reliable public transport, and we submit that significant investment of planning and resources will be required to achieve this in the short term. We assert that commitment to mass-transit as the main transport option for metropolitan Sydney, home to one quarter of the Australian population. We feel that this is unavoidable if good health, safety, social and economic indicators for NSW are to be attained. Sufficient investment in this area will not only deliver better outcomes for the people of Sydney, it will increase the economic viability of the system and reduce expenditure in other related areas in the long term. This will make resources available to the remainder of NSW. For this reason we feel that the costs of providing affordable public transport should be thought of in the context of the net benefits it brings and be provided for accordingly.