

## DO NEW ROADS REDUCE TRAFFIC?

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by Mark Diesendorf

There is considerable community concern in Sydney about the construction of new freeways, road tunnels and their associated exhaust stacks. Proponents support these road constructions on the basis that they will reduce congestion and air pollution and therefore will create a better environment. Unfortunately, this belief is based on misconceptions.

Traffic congestion is not eased by building new roads. In the short term, new roads simply move traffic congestion to their entrances, exits and surrounding regions. In the long term, they encourage more people to use their cars more often. They don't just shift motorists from old roads to new roads. This phenomenon of “induced traffic growth” is well documented in international studies on urban transport.

In Sydney, the Harbour Tunnel provides a case in point. The *Herald* reported that, only three months after its opening, there was a total increase of 15,000 vehicles per day crossing the Harbour. Over a period of three years since the opening, the Environmental Protection Authority found a 21.5% increase in the total amount of traffic crossing the Harbour.

Incidentally, toll roads are often financed on the assumption of induced traffic growth. More cars result in more tolls being collected, and privately financed roads such as the M2, M4 and M5 rely in part on this induced traffic growth to offer attractive returns to their investors.

The proposed cross-city tunnel, running from William Street in Kings Cross, under Park and Drutt Streets to Harbour Street, linking the Western Distributor and the Anzac Bridge with the new Eastern Distributor, will exacerbate Sydney's traffic problem, rather than solve it.

The Roads and Traffic Authority (RTA) claims that the cross-city tunnel will decrease surface traffic and pollution. It is difficult to see how this could occur, if we consider the impact on Sydney as a whole. Streets surrounding the tunnel's exit and entrance, and the eastern and western suburbs in general, will suffer immediately from a general increase in traffic. It is even likely that traffic will grow again to fill the available surface road space above the tunnel's 2 km length, unless there is extensive traffic calming. Therefore, the net effect of the tunnel will be more vehicle trips in Sydney resulting in more emissions and greater air pollution.

Apart from building roads, the other main cause of induced traffic growth is building more parking spaces. The construction of any new parking stations in central Sydney, whether they be underground or above ground, would ensure a greater use of cars in the suburbs surrounding central Sydney.

Instead of the tunnel and increased parking capacity, Sydney would benefit from an upgrade to central train and bus interchanges and improved rail services. In particular, the passenger capacity of Town Hall Station needs to be expanded and the inner Western Suburbs railway line needs a more frequent service. With these modest improvements, faster transit between

Eastern and Western suburbs would be achieved economically and in an environmentally sound manner.

It should be emphasised that, in the inner regions of cities, ordinary bus services are most suitable for short trips, because they have closely-spaced stops and are impeded by congestion caused by other motor vehicles. Light rail (modern trams) running on dedicated track and express buses running on dedicated bus lanes are suitable for medium distance trips, however bus lanes require about 50% more land than light rail tracks. Heavy rail (trains) are most suitable for medium and long distance trips.

Therefore, the RTA's argument, that the tunnel will speed up bus trips on the east-west link across Sydney, should be discarded. It is economically wasteful to make a huge investment so that buses can compete with trains. Rather, we would do better to invest in more train lines (especially light rail with priority at traffic lights and long sections of dedicated car-free track) on heavily used routes, such as:

- Central to Kingsford via Oxford St, Anzac Parade & UNSW.
- City to St Peters via Broadway, City Road & King St, Newtown.
- Extensions to both ends of the existing inner-west light rail.

If, despite the environmental concerns, freeways and road tunnels continue to be built, then the issue of stacks must be addressed. A stack of concentrated exhaust fumes will be released unfiltered into the atmosphere from the proposed cross-city tunnel. The particulate matter contained in the fumes emitted from road tunnels is associated with cardiac and respiratory mortality, and increased hospital admissions, by people breathing the air.

Tunnel emissions could be treated to remove all of the nitrogen dioxide, the compound directly implicated in causing increases in cardiac and respiratory complaints, with filtering systems currently available. Both Japan and Norway have stacks utilising filters to clean the air within and outside tunnels. Similar equipment could be used here in Australia. However, will it be implemented by a government that is still refusing to filter the pollution from stacks proposed for the M5 East in the Wolli Creek valley, and the tunnel on the same road in Woolloomooloo?

To make things worse, it is now clear that the costs of cars, in terms of dollars per passenger per kilometre travelled, are actually greater than those of trains and buses. Research by the Institute for Sustainable Futures (ISF) has found that the cost to society of land occupied by roads and parking is a large fraction of the economic cost of cars. ISF has not yet included environmental and health costs in its study. When the costs of crashes, lung diseases and traffic policing are considered, it is expected that subsidies to cars will be revealed to be substantially greater than those to public transport.

Australian cities provide more road and parking space per person than any other cities in the world, except those of the USA. There is a role for cars, however we suggest that, in the inner regions of Sydney and other Australian cities, the balance has tipped too far towards the car. We can produce better cities, in both economic and environmental terms, if we invest less into roads and parking and more into public transport infrastructure and service frequency, and space and facilities for safe cycling and walking.

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