

INQUIRY INTO CROSS CITY TUNNEL

Organisation: Member for Bligh
Name: Ms Clover Moore MP
Telephone: 02 9360 3053
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Theme:

Summary

electorate office 58 Oxford Street Paddington NSW 2021

phone 02-9360 3053 • fax 02-9331 6963 • www.clovermoore.com • email bligh@parliament.nsw.gov.au

Member for



30 May 2006

The Hon Fred Nile
Joint Select Committee on the Cross City Tunnel Chair
Parliament House
Macquarie Street
Sydney NSW 2000

Dear Chair

Cross City Tunnel Inquiry into Air Filtration

I write to make recommendations to improve the air quality in and around the Cross City Tunnel and the Lane Cove Tunnel. My focus is on the Cross City Tunnel because of the impacts on my electorate.

Pollution Emissions and Health

Over half of the world's air pollution is caused by vehicle emissions. In Sydney, it is estimated that 80 percent of Nitrogen Oxides and 90 percent of Carbon Oxides are derived from vehicle emissions, and their adverse health effects are well documented.

Short-term exposures to the gases that make up vehicle exhaust cause headache, nausea, coughing, wheezing, dizziness, weakness, chest pain, and confusion. Long-term exposure can cause tissue damage, anaemia, respiratory illness, cardiovascular disease, leukaemia, hypertension, pneumonia, lung disease, and asthma attacks, among many others. While everyone is susceptible to the risks associated with exposure to vehicle exhaust, children, the elderly, and people with existing medical conditions are at greatest risk.

Inner city suburbs have high volumes of traffic because of their proximity to the Central Business District, resulting in poor air quality. A major aim for the Cross City Tunnel was to reduce east-west surface traffic through the city, with the potential benefit of reducing and removing air pollution caused by motor vehicles.

Ventilation Stacks

The Cross City Tunnel uses ventilation stacks to discharge emissions from the tunnel. Ventilation stacks improve the air quality in the tunnel while releasing the emissions into the surrounding atmosphere and further polluting the air. The RTA argues that ventilation stacks are an efficient means of dispersing emissions, however dispersion in areas with already high levels of air pollution only deteriorates the air quality.

Portal Emissions

The Cross City Tunnel is also designed to discharge emissions. In conjunction with the road space and vehicles, this degrades air quality for a large number of people in the adjacent densely populated precincts to at both the eastern and western portals. I have consistently raised this concern, particularly with potential impacts on the Altair building, which was designed for natural cross ventilation and built above the eastern portal site before the tunnel was approved.

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Tunnel Filtration

In-tunnel filtration would dramatically decrease the risk of adverse health impacts due to emissions from portals and ventilation stacks.

Tunnel filtration is in use in Norway, Japan and Korea, where electrostatic precipitator technology is used to remove 90 to 95 per cent of particulate matter in tunnel exhaust. In Norway's Laerdal tunnel, technology has been installed to remove NO₂, but not other oxides of nitrogen.

A report provided to me on Norway's Drammen Tunnel indicates that electrostatic precipitators remove more than 90 per cent of particles down to 0.3 microns and more than 95 per cent of particles over 1 micron. The report concludes that electrostatic precipitators can function as an integral part of tunnel ventilation and reduce costs.

The current use of ventilation stacks to disperse emissions ignores the opportunity to remove five to eight percent of central Sydney's vehicle emissions through the Cross City Tunnel's operation. Inner city residents already living with high levels of air pollution expect filtration, not dispersion.

I believe that pollution filtration on the Cross City Tunnel is essential. It is a matter of best practice and precaution for protecting the health and safety of Sydney residents. Current research has not demonstrated any safe lower limit for exposure to particulate matter, and the Government should use all opportunities to reduce these health risks.

There must be clear limits on pollutant levels, and the Government should take action to ensure long term improvement in air quality.

Recommendation 1

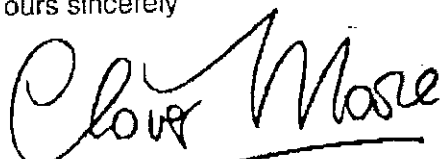
The Cross City Tunnel ventilation stacks must be fitted with the best available technology to filter tunnel vehicle pollution. All future road tunnels, including the Lane Cove Tunnel must be constructed with the best available technology to filter vehicle pollution.

Recommendation 2

Portal emissions should be banned in order to prevent health impacts on adjacent residential areas.

I look forward to the Inquiry's report on this significant health and environmental matter.

Yours sincerely



Clover Moore
Member for Bligh