

**Submission
No 30**

INQUIRY INTO HEALTH IMPACTS OF AIR POLLUTION IN THE SYDNEY BASIN

Organisation: Member for Bligh

Name: Ms Clover Moore

Position:

Telephone:

Date Received: 11/08/2006

Subject:

Summary



11 August 2006

The Director
General Purpose Standing Committee No. 2
Parliament House
Macquarie Street
Sydney NSW 2000

Dear Director

Inquiry into the Health Impacts of Air Pollution in the Sydney Basin Submission

I write to make recommendations to reduce air pollution in the Sydney Basin and to comment on the health impacts.

In 2001, the Australian Bureau of Statistics found that air pollution was the greatest environmental concern for Australians. Residents who contact my office share this concern, they live amongst traffic congestion and road tunnel ventilation stacks and portals. They see the dirty, oily smear that air pollution causes in their homes and fear what this is doing to their health.

Causes of Air Pollution in the Sydney basin

Over half of the world's air pollution is caused by vehicle emissions. Vehicles contaminate the atmosphere by emitting by-products from fuel combustion. In Sydney, it is estimated that 80 percent of nitrogen oxides and 90 percent of carbon oxides are derived from vehicle emissions. Cars also emit toxins such as sulphur dioxide, suspended particles, benzene and formaldehyde.

Due to Sydney's growing population and its increased reliance on car use for travel, concentrated levels of toxins are being emitted in the air, particularly in the inner city. Reports from the Environment Protection Authority confirm that levels of nitrogen oxides are increasing, while ozone and fine particles from vehicle exhausts remain serious concerns.

On 11 March 2003, the Australian Broadcasting Corporation reported that the National Environment Protection Council found that Sydney was the only city in Australia to breach its air pollution goals in the previous year. Benzene levels increased by 100,000 kilograms between 2004 and 2005 and carbon dioxide levels have continually increased since 1996.

Accurate information on Sydney's air quality however is not available.

Currently there are no monitoring sites operating in Sydney's Central Business District, despite the high levels of congestion and human activity. There is an immediate need for air quality monitoring to provide an accurate real-time understanding of the air quality conditions in the most heavily trafficked and most densely populated area of Sydney. The data can be analysed and compared over time, and used for effective planning.

In comparison, Melbourne has two air quality monitoring sites in its Central Business District, both operating for approximately 20 years now, and Brisbane has one site in the city that has been

functioning for about 10 years. Internationally, other major cities have thorough air quality monitoring networks. Sydney should at least have a comparable if not better air quality monitoring system.

- ***I recommend that the NSW Government introduce air quality monitoring in the Central Business District.***

Pollution Emissions and Health

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

Numerous studies show the effect that air pollution has on human health. Sydney hospital admissions of elderly people with cardiovascular disease increase by 10 per cent on days of high particle pollution. With an ageing population, more residents will be vulnerable to the effects of air pollution.

On 28 July 2005, the Sydney Morning Herald reported Sydney research supporting international findings that women living in high-polluted areas give birth to smaller babies.

A recent NSW Public Health Bulletin argues that small doses of pollution damage health, particularly for people with cardiorespiratory conditions. It also states that no safe level for fine particle and ozone pollution has been established.

In a presentation on the health impacts of fossil fuels this year, Associate Professor Ray Kearney from the Department of Infectious Disease and Immunology, University of Sydney reported that twice as many people die in Sydney from air pollution than in road accidents and estimated that the annual health cost is \$2.3 billion.

Air pollution results in serious impacts on health and quality of life, and has high costs in health and welfare services.

Laws and Programs to Reduce Air Pollution

Current laws in NSW make it an offence to sell and own a vehicle that emits “excessive air impurities”. Under the *Protection of the Environment Operations Act 1979* (the Act) vehicles that emit “excessive air impurities” will not be registered or will have their registration suspended, and powers exist to test and inspect vehicles.

However, breaches under the Act are not policed and vehicles are not subject to routine tests for emissions. Emission tests are excluded from annual “pink slip” inspections to renew registration. Without regular testing of vehicles, those that emit excessive air impurities will continue to drive undetected and increase air pollution.

- ***I recommend that legislation be changed to include emission testing for excessive air impurities as part of registration and registration renewal.***

Vehicle emission laws aim to reduce the pollution from individual vehicles, however the impact on overall air pollution is offset against the continuing rapid rise in vehicle kilometres travelled. Vehicle kilometres travelled throughout Sydney are increasing at twice the rate of population growth. While the Government’s policy aims to reduce emissions of individual vehicles, it fails to address accumulated exhaust from large numbers of vehicles. As vehicle kilometres travelled increase,

(3)

resultant traffic congestion makes this problem worse.

A congestion tax was recently introduced in London in order to reduce air pollution in the city centre, where motorists are charged for using roads at the busiest times. While this system has worked well for London, Sydney could not adopt a London-style charge because it lacks an adequate complementary public transport system.

Public transport remains under-funded, badly maintained, and poorly managed, leaving residents with little choice but private vehicles. The Government must improve public transport and encourage greater patronage to reduce traffic and pollution, particularly in congested inner city areas.

In Sydney's inner east, where public transport patronage is the highest, the Government continues to cut bus services. This year services were reduced for the 200, 311, 326 and 327 and the 312 route was axed, forcing more commuters onto private transport and adding to air pollution.

The Government treats bus services as just another commercial enterprise, rather than a basic community service that is necessary for any global city, including significantly reducing air pollution in the metropolitan area. Public transport services need to be improved with new programs to inform commuters that public transport is a viable option.

The Government has consistently dismissed light rail as a solution to Sydney's transport problems. One light rail carriage is equivalent to three full buses or 50 fully laden cars. In Toronto, which is comparable to Sydney in size, the public transport system links buses and heavy rail with light rail. The result is 40 percent more passengers and 30 percent more boardings per capita than Sydney, and at 30 percent lower the cost.

In Sydney, existing systems are at capacity, with bus traffic jams every peak hour in George Street, emitting pollution and discouraging patrons. Light rail is more reliable and has no street level emissions.

- ***I recommend that the NSW Government improve public transport services including expansion of light rail, and develop programs to increase patronage.***

The current fringe benefit tax system allows employers to provide tax benefits for use of vehicles but not public transport, providing employees with an incentive to increase the kilometres they travel in vehicles, because it can be used to reduce taxable income. Dr Chloe Mason of the Institute for Sustainable Futures told the Commonwealth Standing Committee on Sustainable Cities that about 50 percent of vehicle use during peak hour in Sydney is the result of fringe benefit tax concessions, and recommended phasing out this system. Vehicle use is the main cause of air pollution, causing widespread health problems that the health system must fund. The tax system should not reward use of private vehicles at the expense of public transport.

- ***I recommend that the State Government make strong representations to the Commonwealth Government to remove fringe benefit tax concessions for private vehicle use.***

Tax incentives for public transport have been introduced in New York where there are reports of increased patronage, and recently in Canada where these changes are expected to take 56,000 cars off the road.

(4)

- ***I recommend that the State Government make strong representations to the Commonwealth Government to provide tax benefits for public transport use.***

Other Measures to reduce Air Pollution – Tunnel Filtration

In NSW, Government investment in toll roads has taken precedence over public transport, with a trend for underground tunnels, such as the Cross City Tunnel and the Eastern Distributor.

Both the Cross City Tunnel and the Eastern Distributor use ventilation stacks to discharge emissions from the tunnel. They release emissions into the surrounding atmosphere and further pollute 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 reduces air quality.

In the Bligh electorate and the City of Sydney, there are three tunnel ventilation stacks located in close proximity to buildings including homes, and in the case of the Darling Harbour ventilation stack, a children's playground.

Road tunnels such as the Cross City Tunnel are also designed to discharge emissions at their portals. In conjunction with the road space and vehicles, this degrades air quality for residents and workers in adjacent precincts. I have consistently raised concerns about the Cross City Tunnel portals including in my recent submission to the Joint Select Committee on the Cross City Tunnel on tunnel filtration.

I am concerned about the impacts on residents of Woolloomooloo, which is located in a geographic basin close to the Sydney Harbour Tunnel, Cross City Tunnel and Eastern Distributor Tollway portals. I am similarly concerned for residents of the Altair building, which was designed for natural cross ventilation and built above the eastern portal site long before the tunnel was approved.

Due to their health impacts, portal emissions are only allowed in exceptional circumstances. Information on the extent of portal emissions is not publicly available, however there are reports that M5 Tunnel portal emissions were allowed illegally on a number of occasions, and that the Government was considering their use on a regular basis.

- ***I recommend that portal emissions from road tunnels be banned in order to prevent health impacts on adjacent residential areas.***

In-tunnel filtration would dramatically reduce 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 percent of particulate matter in tunnel exhaust. In Norway's Laerdal tunnel, technology has been installed to remove nitrogen dioxide, but not other oxides of nitrogen.

A report on Norway's Drammen Tunnel indicates that electrostatic precipitators remove more than 90 percent of particles down to 0.3 microns, and more than 95 percent 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 fails to use the opportunity to remove a significant amount of Sydney's vehicle emissions through tunnel operations.

I believe that pollution filtration in Sydney's tunnels is essential. It is a matter of best practice and precaution for protecting the health and safety of Sydney residents. The Government should use all opportunities to reduce air pollution.

(5)

- ***I recommend that all Sydney road tunnel ventilation stacks be retro-fitted with the best available technology to filter tunnel vehicle pollution, and that all future road tunnels be constructed with the best available technology to filter vehicle pollution.***

Yours sincerely

A handwritten signature in black ink that reads "Clover Moore". The signature is written in a cursive style with a large initial 'C' and a long horizontal stroke at the end.

Clover Moore
Member for Bligh