Discharging air from the M5 East tunnel
Air quality improvement plan

FACT SHEET
UPDATED SEPTEMBER 2008

This fact sheet has been prepared to provide information on the air quality monitoring that has taken place at the tunnel exits.

On 16 June, 2006, the former NSW Minister for Roads, Eric Roozendaal, announced plans by the NSW Government to improve air quality in the M5 East tunnel.

The air quality improvement plan currently includes:
- Increased ventilation flows with an extra 12 jet fans installed in December 2006.
- Video identification of pollution-causing heavy vehicles and sending evidence of polluting vehicles to the Department of Environment and Climate Change for action.
- A trial of filtration technology.

Contact information
Air quality reporting line - for all matters relating to air quality around the M5 East Motorway and ventilation stack, contact the RTA air quality reporting line on (02) 9963 3221.

Traffic incidents - to report traffic incidents on or near the M5 East Motorway, contact the RTA traffic incidents and road condition reporting line on 131 700.

Air filtration plant construction - for matters relating to the construction of the air filtration plant, please contact the community information line on 1800 667 199.

MS East operation and maintenance line - for general matters relating to day-to-day operation and maintenance of the M5 East Motorway (such as road debris, defective lights or signs), please contact the Motorway Control Centre on (02) 8577 3700.

Want more information? Please contact:
Roads and Traffic Authority, Level 10, Centennial Plaza, 260 Elizabeth Street, Surry Hills NSW 2010
PO Box K198 Haymarket NSW 1240 DX 13 Sydney / telephone: 13 22 13 / email: M5east@rta.nsw.gov.au
How does air move through the tunnels?

Currently, air is recirculated between the westbound and eastbound tunnels and is expelled via a 35 metre stack to the atmosphere. In any month, it is estimated that some 90% of the air passing through the tunnel is released through the ventilation stack. Occasionally air has been released from the tunnel portals or openings. This is due to:

- Vehicle breakdowns and traffic congestion in the tunnel.
- Night time maintenance of the tunnel.

See the diagram showing the ventilation system on the front page.

Has there been any impact to air quality by air exiting the tunnels at the portals?

Two monitoring stations were installed in May 2004, one at the eastern end (Marsh Street) and one at the western end (Bexley Road), refer to the map at right. The monitoring stations were located immediately adjacent to residents closest to the portal. Holmes Air Sciences reviewed the air quality data from near the tunnel portals for the period between May 2004 and May 2005. Holmes Air Sciences considered closely any changes in air pollutant levels in the areas surrounding the tunnel openings.

The Holmes Air Sciences report concluded that there was no clearly discernible difference in air pollution levels during those periods of portal emissions.

Additionally, since May 2005 air quality monitoring has not detected any exceedances of the air quality criteria described in the December 1997 planning approval for the M5 East.

Improvements to visibility in the tunnel

Portal emissions are a part of the air quality improvement plan announced by the NSW Minister for Roads. Studies undertaken in 2006 indicated that visibility in the tunnel could be improved significantly by:

- The release of air from the portals.
- Drawing more clean air into the tunnel.

Increasing the volume of air in the tunnel would dilute pollutant concentrations within the tunnel and reduce tunnel haze.

A proposal was submitted to the Department of Planning on October 2006 for approval to modify the conditions of approval for the release of tunnel air from the portals.

Following community feedback the RTA subsequently withdrew this part of the request to modify the conditions of approval.

Maintaining air quality around the portals during periods when air is released from the portals continues to be a priority for the RTA.

Finding the best solution

The RTA will progressively assess different scenarios to release air from the tunnel. The aim will be to develop the safest and best way to operate the tunnel, meeting the needs of both tunnel users and the surrounding community.

Protocols will be developed around:

- Air flow rates to maximise the benefits for in-tunnel air quality and minimise the potential for air impact.
- Air quality ‘trigger’ levels that are better than the existing air quality goals as specified in the M5 East planning approval.
- If the trigger levels are reached, there will be no portal emissions. This will provide a factor of safety for the operation of the tunnel, so that the existing air quality goals are not exceeded.

The effectiveness of any proposal for portal emissions would be assessed by monitoring in-tunnel visibility and air quality at the portals.

What happens next?

The RTA will consider submitting a new proposal for the release of tunnel air from the portals following further monitoring and modelling of air quality in the vicinity of the tunnel portals.

Did you know?

The RTA now has a simpler, easier to use website that shows real time information of air quality. Go to www.rta.nsw.gov.au

You view the current readings for nitrogen dioxide (NO2), carbon monoxide (CO) and particulate matter (PM10) for any of the five monitoring stations.

You can also view how these readings measure against the air quality limits and goals for each pollutant.