



Investigation into the possible health impacts of the M5 East Motorway Stack on the Turrella community

Phase 2 – a cross-sectional survey of symptom prevalence

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This study into the possible health impacts of the M5 East exhaust stack was conducted on behalf of NSW Health by the Environmental Health Branch, NSW Health.

The NSW Health Survey Program's Computer Assisted Telephone Interview (CATI) facility, Centre for Epidemiology and Research, NSW Department of Health conducted the interview and compiled the interview data.

The Roads and Traffic Authority (RTA) supplied stack emission, pollutant monitoring and traffic data.

Dr Mark Hibberd, CSIRO Division of Atmospheric Research was commissioned to model the exposure levels.

Alan Willmore of the Centre for Epidemiology and Research outlined level-of-exposure zones from the modelled stack emission data, geocoded residential address data and created the sample for the survey.

Katie Irvine of the Centre for Epidemiology and Research weighted the survey dataset, calculated the prevalence estimates, the 95 per cent Confidence Intervals and analysed the data in SUDDAN using the models proposed by the steering group.

Adam Capon undertook SAS coding and preliminary analysis of data.

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The steering group for the health investigation includes:

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Executive Summary

This report details the outcomes of the second phase of the investigation into potential community health impacts around the M5 East stack. It was designed after considering the findings of the first phase of this investigation, which identified symptoms with a possible relationship to the M5 East stack among community members who perceived that the M5 East stack was affecting their health.

We conducted a survey to compare the prevalence of eye, nose and throat symptoms between areas with relatively high, medium and low levels of exposure to emissions from the M5 East stack. These areas were defined by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) - Atmospheric Research using an analysis of emitted stack pollutants and pollutant readings at local monitoring sites from February 2002 to January 2003.

Within each of the three areas households and individuals were selected at random for telephone interview. Information was collected from 1431 individuals on eye, nose and throat symptoms, as well as demographic characteristics, general health, exposure to tobacco smoke and other indoor pollutants.

We found no evidence of an association between prevalence of reported symptoms and modelled emissions from the M5 East stack. The methodology used represents the best feasible epidemiological approach to determining if there are population health effects from the M5 East stack emissions.

On the basis of these findings we believe that there is no scientific justification to conduct further epidemiological studies into the reported health effects on the community surrounding the M5 East stack.