



Australian Acoustical Society

A.C.N. 000 712 658

NEW SOUTH WALES DIVISION

## **TECHNICAL MEETING**

# **The Effects of the Atmosphere on Noise Propagation and how to deal with it in Environmental Assessments**

**The Date:** Tuesday 8<sup>th</sup> June 2010  
**The Venue:** National Acoustics Laboratories  
126 Greville Street, Chatswood  
**The Time:** 6.30pm

**The Speaker:** Nigel Holmes, PhD. Atmospheric Physicist

Nigel is an atmospheric physicist. He was co-founder of Holmes Air Science, which is now part of PAEHolmes.

It is well known that meteorological conditions have a significant influence on the propagation of sound. Dealing with these effects in environmental assessments has proved challenging. The NSW Government's "Industrial Noise Policy" (INP) published in 2000 outlined methods by which these effects could be taken into account in noise assessments. The INP methods rely in part on an analysis of meteorological data which can be tedious. Recently the DECCW commissioned Holmes Air Sciences to assist in developing a computer-based tool to analyse routinely available meteorological data to assess in accordance with the INP procedures whether wind was a factor that needed to be considered in assessing the effects of noise at a particular location. The tool that was developed is known as NEWA. The tool and notes for its use were published on the DECCW's web site in 2009 ( see <http://www.environment.nsw.gov.au/noise/newaCalculator.htm>).

The presentation will review the ways in the atmosphere affects noise propagation and discuss the logic behind the INP procedures and will describe the NEWA tool and show how to use it.

The NEWA tool is confined to evaluating the effects of wind speed and direction on noise. It does not deal with the effects of temperature (e.g. inversions etc). The presentation will also discuss the effects of temperature and by reference to a recently completed research project (funded by the Australian Coal Association Research Program (ACARP)) will explore the general question of noise propagation in the real atmosphere and suggest how the next steps might be taken in assessing and managing noise where the effects of wind and temperature gradients are important.

**'ANYONE' is welcome to attend and refreshments will be provided**

**RSVP FOR CATERING PURPOSES BY**

Monday 7<sup>th</sup> June 2010 to Neil Gross by email

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