



Our mission is to help conserve the natural environment of the Greater Blue Mountains and to increase awareness of the natural environment in general.

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## NEPEAN MICRO-CLIMATE: A BAD FIT FOR AN AIRPORT AND ROAD EXPANSION

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How often have you looked east from a vantage point in the Blue Mountains and observed a dirty brown cloud hanging in the Sydney Basin, especially over the catchment of the Nepean River? Of the nasties which might be hanging in such clouds (including photochemical smog, ozone and diesel emissions), there are some which are visible to the naked eye and others which are not. Most of them have the potential to harm native plants and animals, the quality of drinking water stored in Lake Burrangong and, of course, human health.

As the present State Government is supporting rapid establishment of Badgerys Creek Airport and unprecedented upgrades that will increase road traffic in Greater Sydney, it is time to question the air quality repercussions. Relevant factors include the total numbers of land-based vehicles and aircraft, the total time each vehicle will spend in the Sydney Basin, the success or otherwise of innovations to decrease each vehicle's emissions and less localised changes to average temperatures and atmospheric conditions associated with global climate change.

It is obvious that scientific modelling of these effects will be complex and imprecise. Common sense would always dictate caution about making such major changes when they threaten a large World Heritage Area as well as a substantial and growing urban population. The research associated with various Second Sydney Airport studies over a number of years has failed to reach convincing conclusions.

A particular contributor to the micro-climate of the Nepean catchment should make us especially concerned. The lower lying areas, both in the World Heritage Area and in the urbanised locations within the catchment are subject to temperature inversions. These inversions can come about from a variety of factors relating to the warming and cooling of the land and the atmosphere. They create delays to the dispersal of harmful atmospheric pollutants. In recent decades, these delays have been more serious during the winter months.

The worst effects have probably occurred in the lowest lying localities. Vulnerable ecosystems along the Wollondilly and Coxs Rivers, as well as the surface of the Burrangong drinking water storage could be more at risk if the total volume of emissions increases. How confident can we be that technological solutions will keep pace with the huge increase in the numbers of pollution sources and their westward shift towards the Nepean?



(Cartoon from Kim Robson, <http://green-mom.com>)