



Project

AU Campus Air Quality Assessment

Application

Outdoor Air Monitoring

Scope

Measuring baseline air quality at an Australian campus using handheld technology, in compliance with state and national standards.



Equipment and services

Aeroqual Ranger
PM₁, PM_{2.5}, PM₁₀, TSP

Consultants

Juliet Duffy
Founding Director, EnviroScience Solutions

Date

May - June 2025

Testing campus air quality in Australia

A market-leading hazardous materials and environmental management consultancy firm deployed the Aeroqual Ranger while conducting a recent outdoor air quality assessment in New South Wales, Australia.

EnviroScience Solutions was asked to establish a baseline air quality reading at a busy educational campus. The client was preparing to expand the Animal Studies facilities, which provide practical training in animal care and first aid. The proposed expansion involved converting a workshop used for construction training into animal housing. This new area was expected to house a combination of small animals (e.g., rabbits, guinea pigs) and up to three dogs, on a limited basis. On-site time for the animals would be split between indoor facilities and an outdoor play area bordering a main public road and near a residential neighbourhood.

To ensure that nearby sensitive receptors would not be impacted, EnviroScience Solutions conducted a site inspection and measured ambient dust and odour to establish a baseline. Ambient dust sampling involved collecting 15-minute samples of several particulate matter fractions, including PM₁, PM_{2.5}, PM₁₀, and Total Suspended Particulate (TSP), at 11 locations around the campus.

Project challenges

Carrying out an assessment on a busy campus meant working around the movements of the large student population. Certain locations had to be assessed only while students were on break, to ensure baseline results weren't skewed by additional dust-generating activities. Ambient dust measurements also had to include several particle fractions, with EnviroScience Solutions using a combination of statewide (NSW EPA) and national standards as a reference. These national standards included the National Environment Protection Measure for Ambient Air (Air NEPM) and Safe Work Australia's "Guidance on the interpretation of workplace exposure standards for airborne contaminants" document.

Project outcome

All ambient dust samples were well below the recommended exposure limits, with no odours detected following a visual, olfactory, and desktop review of site conditions. Ultimately, the proposed development was assessed to be a low environmental risk due to limited animal occupancy and the implementation of several ongoing mitigation measures. On the Ranger's portability, EnviroScience Solutions Founding Director Juliet Duffy added, "We're working across most of New South Wales, with offices throughout the state, so being able to courier our Ranger devices between offices overnight and have them on site the next day when needed is a huge plus."

"As a multidisciplinary organization, we're not only dealing with occupational hygiene, but also contaminated sites, environmental compliance, fire assessments, landfill monitoring, and IAQ studies. We've found the Ranger to be a hugely flexible solution, deploying it with confidence across a range of air quality applications."

"The ability to quickly swap between sensor heads in the field with Ranger was a really useful element for this study."

Juliet Duffy
Founding Director, EnviroScience Solutions