



Project

Highbrook Business Park
Auckland, New Zealand

Application

Environmental Impact Assessment
(EIA)

Scope

Short-term air quality monitoring study at the site of a proposed childcare facility.



Equipment and services

Aeroqual AQS 1 monitor
Aeroqual Cloud software
PM_{2.5}, NO₂, O₃, Wind

Client

Highbrook Business Park

Consultant

AECOM

Supplier

Aeroqual

Date

2017 - 2018

Expanding real-time air quality assessment on a tight budget

AECOM's Environmental Services portfolio includes air quality consulting, with over 400 global experts providing objective, science-based solutions. A client required an expansive EIA for a proposed childcare facility located in an industrial business park.

AECOM assessed air quality for a proposed early learning center near a Heavy Industrial Zone and arterial roads in Auckland, the largest city in New Zealand. This assessment focused on potential impacts from industrial processes and traffic-related emissions, evaluating pollutants such as VOCs, dust, silica, ozone, and combustion emissions (NO₂, PM_{2.5}).

Project challenges

The project permit application required a minimum of a three-month dataset for PM₁₀, NO₂, and BTEX, prompting the installation of EPA reference analyzers and diffusion tubes. However, due to the project's sensitivity and scrutiny, the client also requested real-time data insights for PM_{2.5}, NO₂, and ozone, but budget constraints limited additional monitoring equipment.

To address this, AECOM partnered with Aeroqual to deploy an AQS 1 compact air quality station at the site. The AQS 1 monitor provided real-time data for PM_{2.5}, NO₂, ozone, and meteorological parameters. It was easy to install, cost-effective, and pre-calibrated. The data collected was transmitted to Aeroqual Cloud for analysis and daily report generation.

Project outcome

At the end of monitoring, calibration checks verified data accuracy, which exceeded the client's expectations. In summary, Jonathan Harland, Senior Air Quality Scientist at AECOM, commented, "The approach using the AQS 1 worked out cost-effective for the project. The setup was quick, and the data capture was high. We were able to give the client valuable insights not available by conventional methods within the budget."

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Jonathan Harland
Senior Air Quality Scientist, AECOM