

Blue Mountains and Lithgow Ambient Air Quality Monitoring

**May 2019 Snapshot
February 2020**



Participating Organisations:

Blue Mountains City Council

Blue Mountains Conservation Society

Blue Mountains Union and Community

Doctors for the Environment

Environment Protection Authority

Lithgow Environment Group

Lithgow City Council

Nepean Blue Mountains Local Health District

Department of Planning, Industry and Environment

Western Sydney University

BACKGROUND

The Blue Mountains and Lithgow Air Watch project is a 12 month community initiated research project supported by the NSW Environment Protection Authority (EPA) and the NSW Department of Planning, Industry and Environment (DPIE, formerly the Office of Environment and Heritage), as well as other local stakeholders.

The purpose of the project is to provide a better picture of air quality in the region and help inform future initiatives to protect air quality. The intent of this May snapshot is to present findings for the partial monitoring period at the start of the project from 14th to 31st May 2019.

Further information on the data collection methods, instrumentation and analysis can be found in the supplementary background report for the study.

Katoomba Compliance Station Monitoring

Air quality in Katoomba during May 2019 was significantly impacted by hazard reduction burns undertaken in the mid Blue Mountains, during which the health based air quality standard for PM_{2.5} of 25 µg/m³ (24-hour average) and PM₁₀ standard of 50 µg/m³ (24-hour average) were exceeded between 21st and 24th May 2019 (Figure 1). Carbon monoxide levels also peaked during this period but did not exceed the national standard for air quality of 9.0 ppm (8-hour average). Outside of the hazard reduction burns, daily particulate concentrations were typically less than 10 µg/m³.

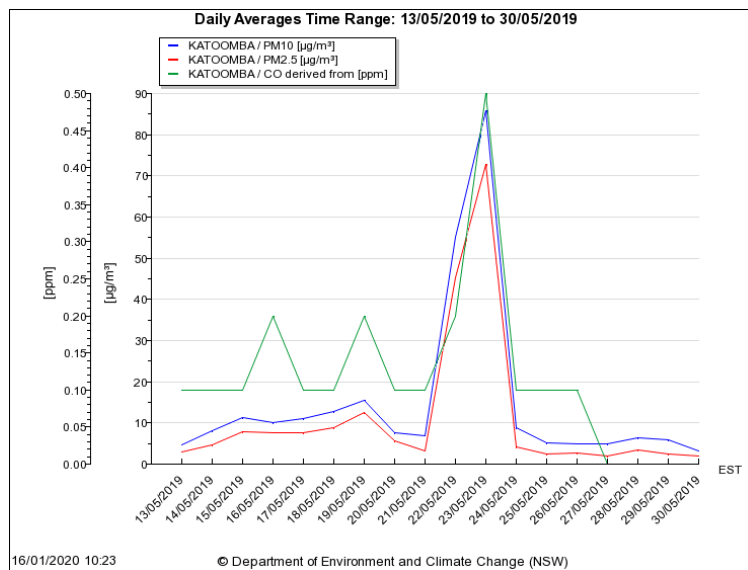


Figure 1: Time Line of Daily PM_{2.5}, PM₁₀ and Carbon Monoxide Daily Averages from Katoomba Compliance Station, 14th to 31st May 2019

KOALA Low Cost Sensors May Data

Low cost air quality sensors, known as KOALAs (Knowing Our Ambient Local Air-Quality) are located at Katoomba, Lithgow, Springwood and Wentworth Falls. During May 2019, the PM₁₀ and PM_{2.5} measurements were higher for Springwood, in comparison to Katoomba, Lithgow and Wentworth Falls (Figure 2). The biggest impact on local air quality during this period were the hazard reduction burns which were closest to the trio of KOALAs located in Springwood, the PM_{2.5} peaks from which can be seen in Figure 3. Carbon monoxide levels followed a similar pattern to particulates (Figure 4).

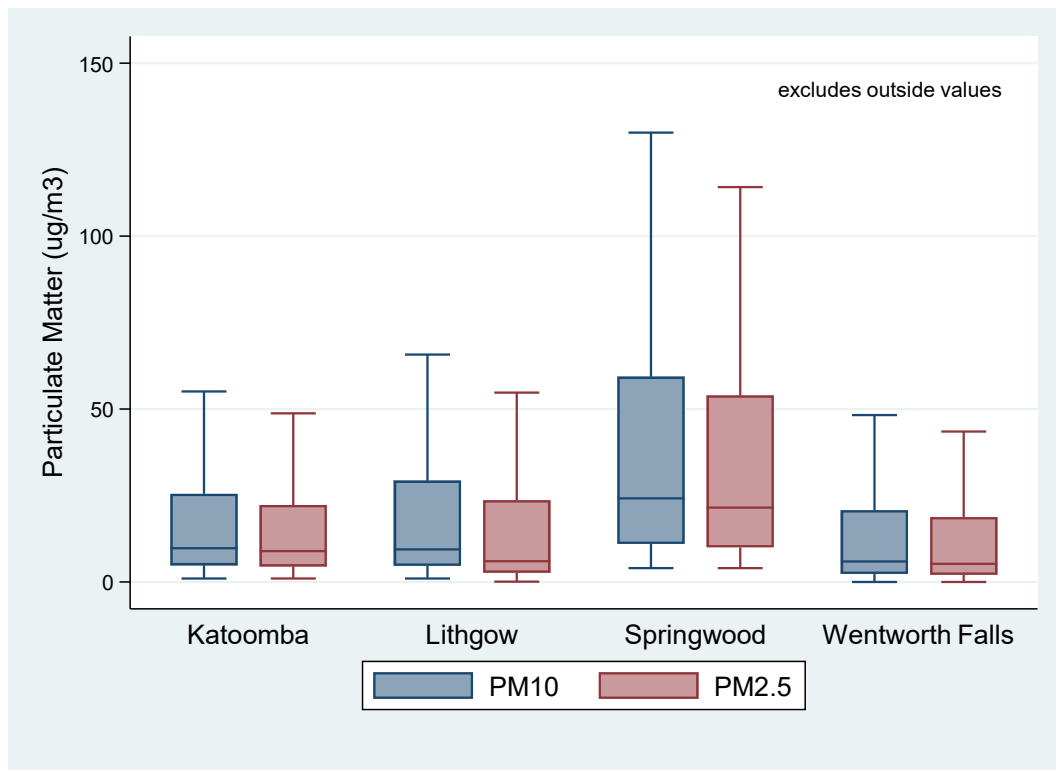


Figure 2: Comparison of Particulate Concentrations by Township, 14th to 31st May 2019.

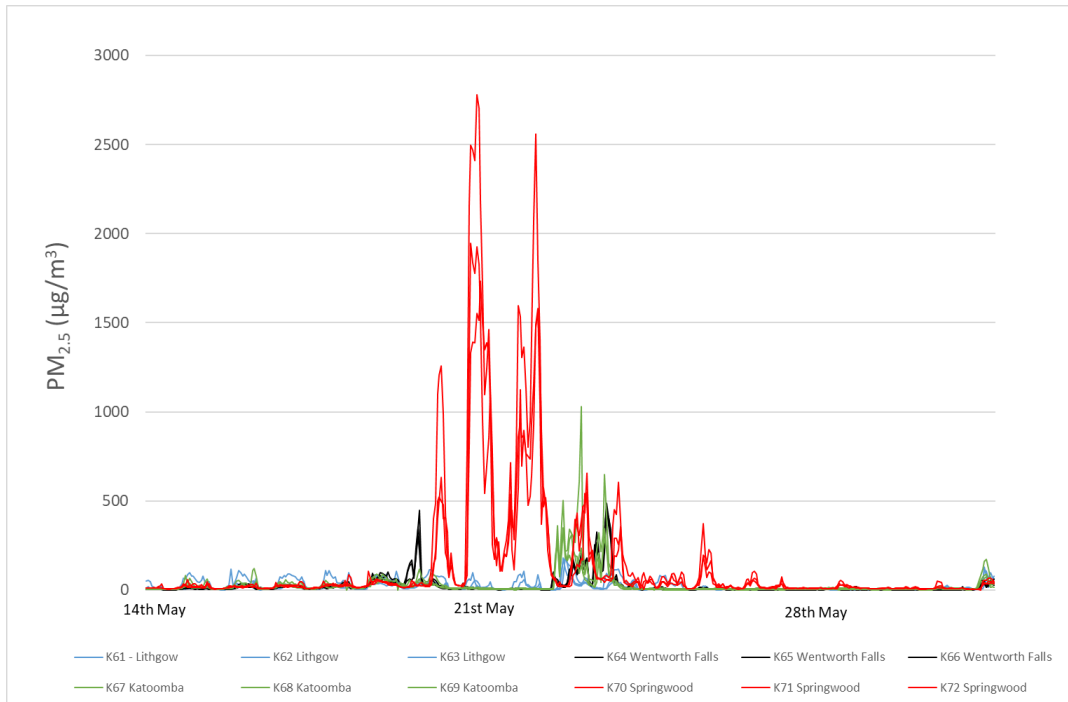


Figure 3: KOALAs Hourly PM_{2.5} Averages By Township, 14th to 31st May 2019

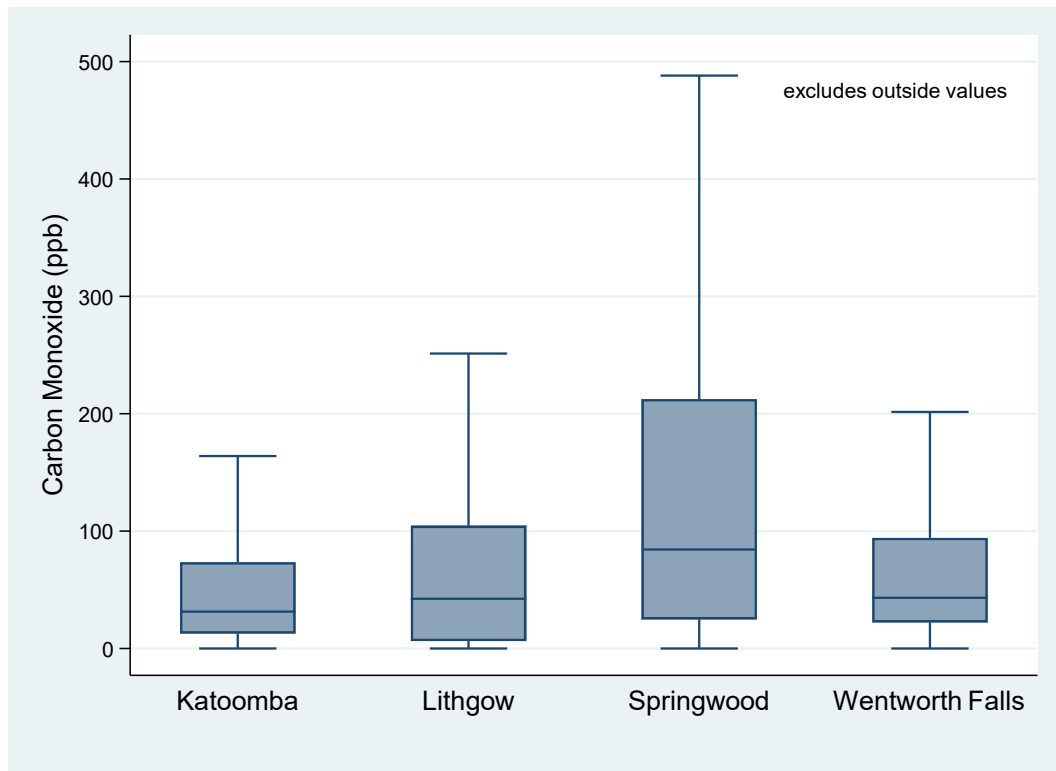


Figure 4: Comparison of Carbon monoxide Concentrations by Township, 14th to 31st May 2019