

Supplementary Information

Mapping temporal and spatial variability of air quality at the microscale, using a combination of low-cost sensors and land-use regression modelling

L.F. Weissert¹, K. Alberti², G. Miskell¹, W. Pattinson³, J.A. Salmond⁴, G. Henshaw², David E. Williams^{1,5}

1. School of Chemical Sciences, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

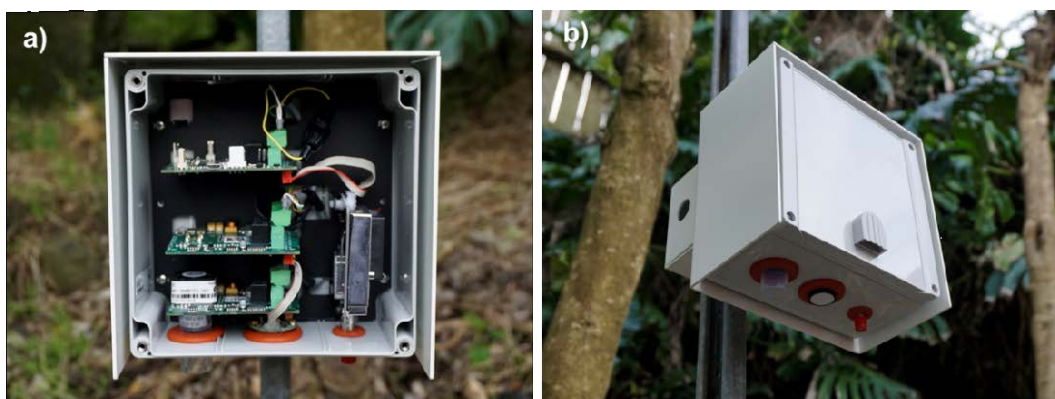
2. Aeroqual Ltd, 460 Rosebank Rd, Avondale, Auckland 1026, New Zealand

3. Mote, 40 George St, Mount Eden, Auckland 1024, New Zealand

4. School of Environments, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

5. MacDiarmid Institute for Advanced Materials and Nanotechnology, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand

1. Low-cost instruments and site photos



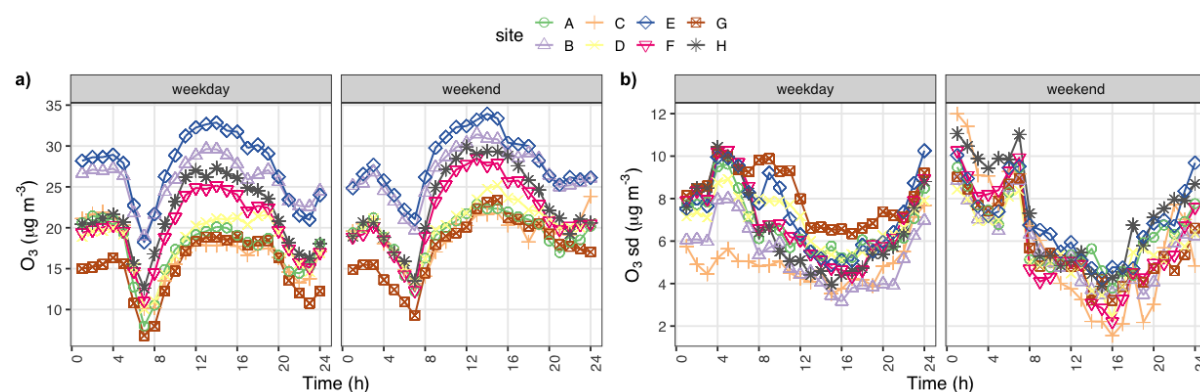
Supplementary Figure 1: Photographs of the low-cost sensor showing: a) interior of the instrument, b) outside of instrument with sensors protruding through grommets on the bottom.



Supplementary Figure 2. Photos of the low-cost sensor sites. The sensor is circled in red.

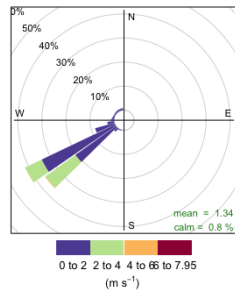
2. Results from Dominion Rd

Supplementary Figure 3 shows the diurnal variability in mean O_3 concentrations and 1-hour standard deviation at the study sites along Dominion Rd.



Supplementary Figure 3. Weekday and weekend diurnal variability of a) mean O_3 concentrations and b) the standard deviation.

Wind data retrieved from a sonic anemometer (WindSonic, Gill Instruments Ltd.) that was installed at one of our sites (site F), showed that the dominant wind direction throughout the study period was from the south-west (Supplementary Figure 4).



Frequency of counts by wind direction (%)

Supplementary Figure 4. Windrose for the study period.