

APPENDIX B – AIR QUALITY

A1000 Cycle Scheme – Air Quality Update November 2021

Scientific Services, Environmental Health have installed three diffusion tubes for ambient NO₂ monitoring along the experimental A1000 cycle lane. Monitoring at Diploma Court, High Road, N2 8NY (CL 1) and Granville Place, High Road, N12 0AY (CL 2) commenced in February 2021, and monitoring close to Martin Primary School, N2 9JP (CL 3) commenced in June 2021.

The monitoring locations at CL 1 and CL 2 are representative of relevant public exposure (i.e., façade of residential buildings). CL 3 was selected to identify potential health hazards from a traffic hotspot; this part of the road is frequented by pedestrians using the school. The locations of these tubes are shown in Appendix 1.

As of December 2021, 10 months (February to November inclusive) of monitoring have been completed at CL 1 and CL2. 6 months (June to November inclusive) of monitoring have been completed at CL 3.

The average NO₂ concentrations at CL 1 and CL 2 over 10 months is 33.40 µg/m³ and 25.30 µg/m³ respectively.

Over the same February to November period, the concentration of NO₂ at PBN8 was on average 38.64 µg/m³.

After 6 months of monitoring (June to November), the concentration at CL 3 was 28.49 µg/m³.

Over the same 6-month period, the concentration at PBN 8 is 39.39 µg/m³.

The NO₂ concentration at CL 2 was on average 13 µg/m³ lower than the NO₂ concentration at PBN8 over the corresponding period. This is a 35 % improvement.

The NO₂ concentration at CL 1 was on average 5 µg/m³ lower than the NO₂ concentration at PBN8 over the corresponding period. This is a 14 % improvement.

The evaluation of the first six months of monitoring show that the NO₂ concentration at CL 3 was on average 11 µg/m³ lower than the NO₂ concentration at PBN8 over the corresponding period. This is a 28 % improvement.

The three monitoring stations along the A1000 cycle lane have typically lower concentrations than at Tally Ho Corner: excluding March and April 2021 at CL 1, and August 2021 at CL 3; despite all three locations having relatively similar levels of traffic. Figure 2 in Appendix 1 displays the monthly trends at all monitors. This is likely because the cycle lane monitors are located further away from the carriage lane, due to the cycle lane in between. The reduction of congestion due to the removal of parking on A1000 also contributes to improved conditions, as traffic can flow more freely without cars manoeuvring and potentially blocking the carriageway.

Appendix 1

Table 1: Non-Automatic Monitoring Sites along the A1000 cycle lane

Site ID	Monitoring Location	OS Grid Ref	Latitude and Longitude	Site type	Inlet height (m)	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (m)
CL 1	Diploma Court, High Road, N2 8NY	527270, 189372	51.588839, -0.164282	urban centre	2.5	0m (façade of residential building)	11
CL 2	Granville Place, High Road, N12 0AY	526457, 191298	51.606325, -0.175308	urban centre	2.5	0m (façade of residential building)	15
CL 3	Martin Primary School, High Road, N2 9JP	526954, 190001	51.594557, -0.168605	roadside	2.5	2m (school receptor)	8

Figure 1: Non-Automatic Monitoring Sites

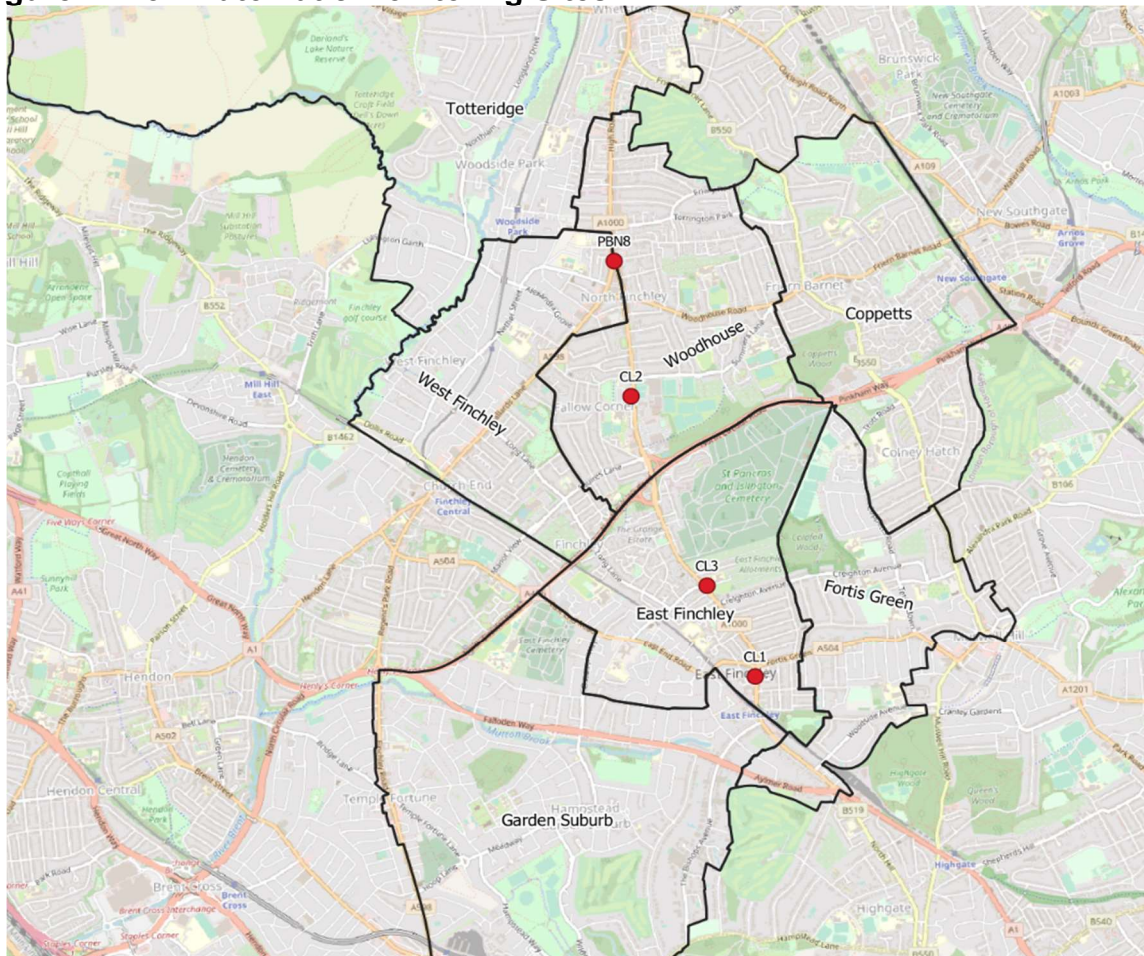
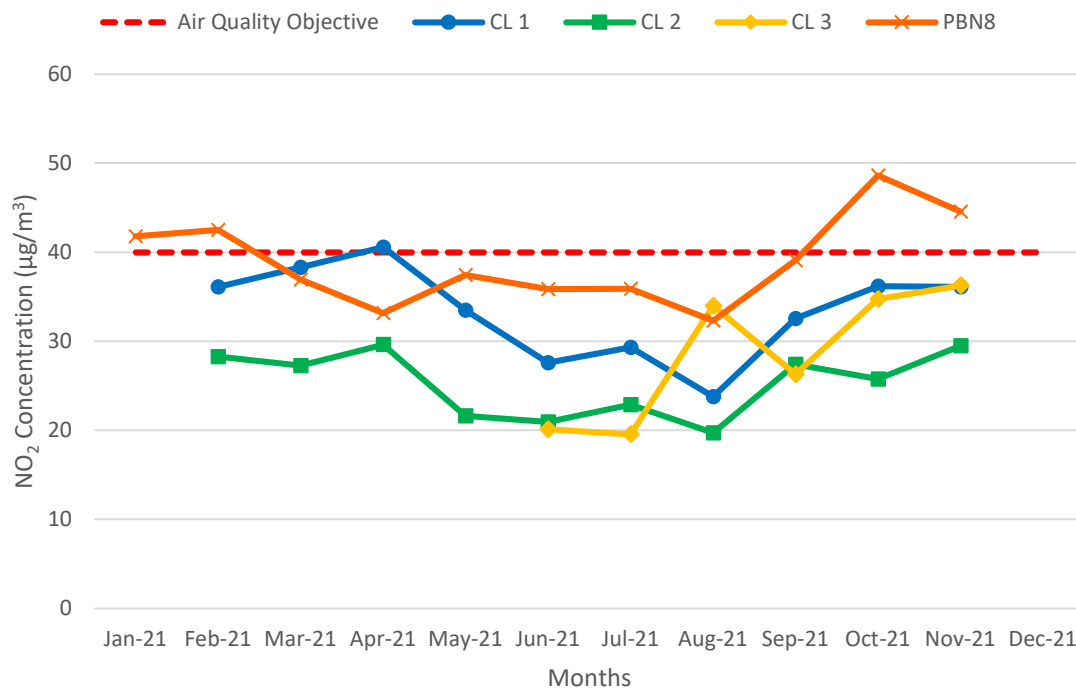


Figure 2: Monthly Trends at the A1000 Cycle Lane Monitoring Locations and Tally Ho Corner.



Within the 6-month monitoring period, CL 1 recorded concentrations greater than 36 µg/m³ from February to April and October to November. Greater than 40 µg/m³ (i.e., above the national air quality objective) was recorded in April 2021. It should be noted however that in April 2021 very dry east winds were noted in South East England bringing in pollution (e.g., NO₂) from the continent.

Within the 10-month monitoring period, CL 2 did not record concentrations greater than 36 µg/m³.

Within the six-month monitoring period, CL 3 recorded concentrations greater than 36 µg/m³ once in November 2021.

It should be noted that these concentrations are subject to change after ratification.