

City of London Underground Vent Shaft Monitoring Project

Report Summary

1.1 A review of baseline air quality at the proposed development site shows that, whilst areas of high NO₂ concentrations persist within the local area, recorded concentrations of PM₁₀ and PM_{2.5} are well within the relevant annual AQS objective values.

1.2 Literature related to PM concentrations at underground railway stations and in vent shafts was also reviewed. The results of similar studies indicated that whilst the concentrations underground can be very high, these concentrations are likely to quickly disperse when vented. It is likely that the emissions from the ventilation shaft at the new Greyfriars Square location would not be sufficient to impact long term ambient pollutant levels in the area surrounding the shaft.

1.3 The average concentrations for the monitoring period were below the relevant annual AQS objective values. At site 281, the closest monitor to the new Greyfriars Square, recorded PM₁₀ and PM_{2.5} concentrations during the monitoring period with also close to the Mayor of London's 2028 target for PM_{2.5} and the WHO limit value for PM₁₀.

1.4 A comparison with regional pollution events in London during the monitoring period revealed that these were the driving factor behind any observed episodes of higher PM concentrations recorded at the monitoring sites, rather than emissions directly attributable to the underground ventilation shaft.

1.5 Based on the particulate matter data collected by the Zephyr monitors over the study period, the ventilation shaft at the Greyfriars Square does not cause elevated ambient concentrations of PM₁₀ and PM_{2.5} in the monitored locations. As such the site would be considered suitable for its intended use and pollutant concentrations considered appropriate for the intended future users of the site.