

Supplementary Information

Mobile monitoring reveals the importance of non-vehicular particulate matter sources in London

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1 Distance-weighted PM Concentrations

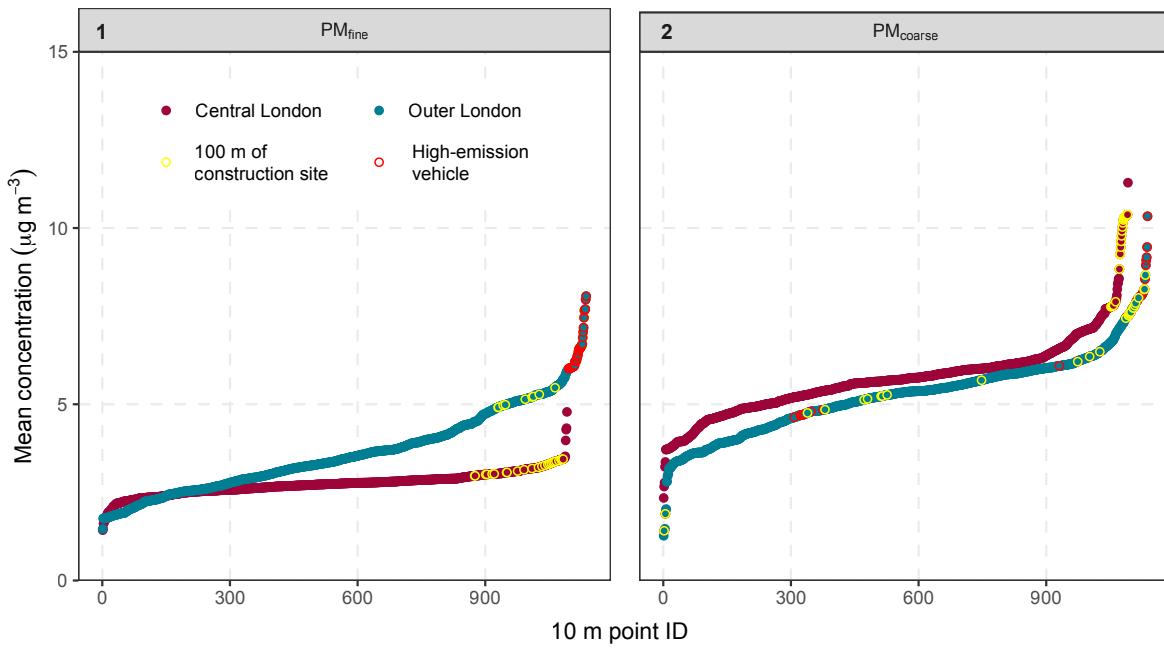


Figure S1 Distribution of distance-weighted mean concentration enhancement values for PM_{fine} (panel 1) and PM_{coarse} (panel 2) for each measurement location. The x-axis represents the identifier for each (10 m spaced) point arranged in ascending order of concentration. Points highlighted in yellow were within 100 m of construction sites A and B, and point highlighted in red were on the road section that contained the high-emission vehicle.



Figure S2 Photos of construction sites A and B in Central and Outer London, captured by the mobile platform onboard camera.

2 High-emission Vehicles



Figure S3 Photos of the high emission vehicles measured in Outer London, captured by the mobile platform onboard camera. Photo 1 is a vehicle measured on the driving route and photo 2 is a second vehicle measured off the driving route.

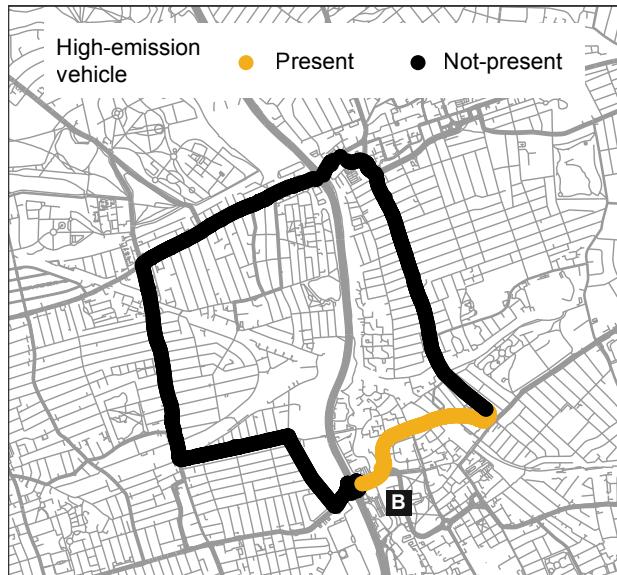


Figure S4 Map of the Outer London Driving route highlighting the section on which the high-emission vehicle was present. The label B denotes the position of a major construction site.

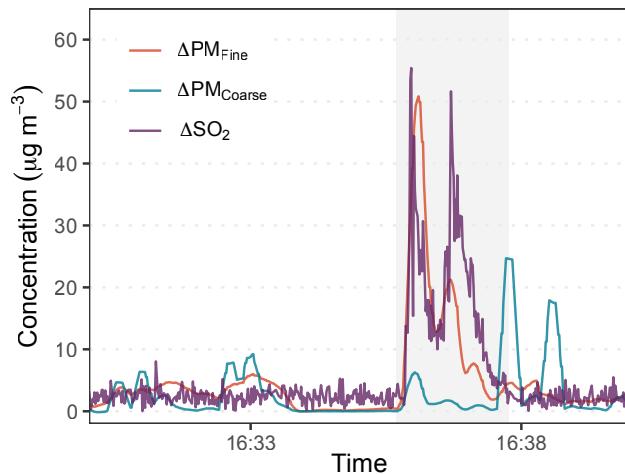


Figure S5 Time series tracking a high emission vehicle in Outer London, outside of the designated driving route. The grey shaded area represents the time period during which vehicle was being measured.

3 Non-vehicular PM Sources

Table S1 Mean PM enhancement concentrations for wet and dry weather conditions in Central London, presented with 95% confidence intervals. Measurements made within 100 m of construction site A were excluded.

Species	Concentration ($\mu\text{g m}^{-3}$)	
	Dry	Wet
$\Delta\text{PM}_{\text{fine}}$	2.48 ± 0.02	2.88 ± 0.03
$\Delta\text{PM}_{\text{coarse}}$	5.85 ± 0.10	4.96 ± 0.07



Figure S6 Photos of the secondary construction sites in Central London, captured by the mobile laboratory onboard camera.

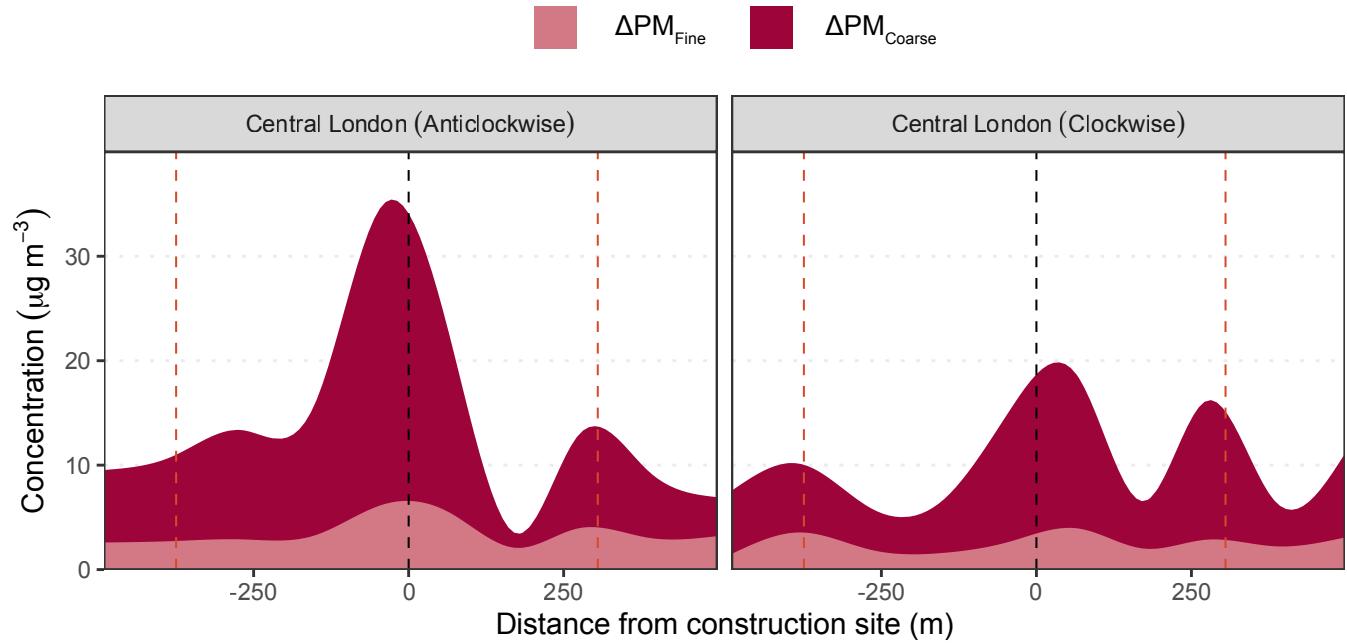


Figure S7 Concentrations of $\Delta\text{PM}_{\text{fine}}$ and $\Delta\text{PM}_{\text{coarse}}$ within a 1 km road segment centred on construction site A in Central London, calculated using GAMs. The data are separated by direction of travel along the driving route. The two orange dashed lines denote the position of smaller secondary construction work.