Supplementary Information (SI) for Environmental Science: Advances. This journal is © The Royal Society of Chemistry 2025

#### **Supplementary information**

#### Figure S1

Flowcharts showing air sampling and olfactive assessment method flows. The flowchart begins at the top and works methodically through the steps downwards through to the bottom. Unless specifically stated, the time taken between the steps tended to vary based on logistics.



## Figure S2(a)

Top-down view of the large booth layout. Numbered elements are as follows: 1 - LE plug location, 2 – Air in flow vent, 3 – Canister sampling location, 4 – Air out flow vent, 5 – Access door. The height of the booth was 2.49 m, giving a final volume of 33.24 m<sup>3</sup>.



## Figure S2(b)

Top-down view of the toilet booth layout. Numbered elements are as follows: 1 - LE plug location, 2 – Air in flow vent, 3 – Canister sampling location, 4 – Air out flow vent, 5 – Access door. Ovals at the top of the schematic represent two toilets fitted on a plinth. The height of the booth was 2.6 m, giving a final volume of 9.48 m<sup>3</sup>.



## Table S1

Instrument limits of detection (LOD) and quantification (LOQ) for the six fragrance species  $\alpha$ -pinene,  $\beta$ -pinene,  $\gamma$ -terpinene, *p*-cymene, eucalyptol and benzaldehyde.

Species	LOD (ppt) / LOD (ng m <sup>-3</sup> )	LOQ (ppt) / LOQ (ng m <sup>-3</sup> )
α-pinene	2.93 / 16.3	9.76 / 54.4
β-pinene	2.93 / 16.3	9.76 / 54.4
γ-terpinene	2.93 / 16.3	9.76 / 54.4
<i>p</i> -cymene	2.93 / 16.1	9.76 / 53.6
eucalyptol	3.16 / 20.0	10.5 / 66.6
benzaldehyde	4.88 / 21.2	16.3 / 70.6

# Figure S3

Re-plot large booth benzaldehyde linearity, using the 0 LE concentration from the toilet booth to attempt to de-skew the regression caused by the outlaying 0 LE large booth benzaldehyde concentration. The resulting linearity was of significance. Regression statistics were calculated using Spearman's Rho, and the line equation was calculated using a linear model.

