Additional File 4: Association between urban metrics and mortality from all causes and mortality due to CVD and traffic accidents.

Shown are differences in relative risk (RR) for 2nd tertile (T2) and 3rd tertile (T3) in relation to the reference category (1st tertile)

Urban metrics	Model 1 (adjusted for age) RR (95% CI)		Model 2 (additionally adjusted for deprivation and lung cancer mortality) RR (95% CI)	
	Female (all ages)	Male (all ages)	Female (all ages)	Male (all ages)
All-cause mortality				
Population density T2	1.04 [1.04 – 1.05]*	1.06 [1.06 – 1.07]*	0.97 [0.97 – 0.98]*	0.98 [0.97 – 0.99]*
T3	1.06 [1.06 – 1.07]*	1.09 [1.09 – 1.10]*	1.01 [1.01 – 1.02]*	1.02 [1.01 – 1.03]*
Minor Road Density T2	1.08 [1.07 – 1.08]*	1.09 [1.08 – 1.10]*	0.98 [0.97 – 0.99]*	1.00 [0.99 – 1.01]
T3	1.09 [1.08 – 1.10]*	1.12 [1.11 – 1.23]*	1.01 [1.00 – 1.02]*	1.01 [1.00 – 1.02]*
Junction Density T2	1.08 [1.07 – 1.08]*	1.07 [1.06 – 1.08]*	1.07 [1.06 – 1.07]*	1.05 [1.04 – 1.06]*
T3	1.13 [1.12 – 1.13]*	1.14 [1.13 – 1.15]*	1.08 [1.07 – 1.09]*	1.05 [1.04 – 1.06]*
% pop close to road T2	0.98 [0.98 – 0.99]*	1.01 [1.01 – 1.02]*	0.98 [0.97 – 0.99]*	1.02 [1.01 – 1.03]*
T3	1.07 [1.06 – 1.07]*	1.10 [1.09 – 1.10]*	0.90 [1.01 – 1.02]	1.03 [1.02 – 1.04]*
Shannon Diversity T2	0.99 [0.98 – 0.99]*	1.01 [1.00 – 1.02]*	0.96 [0.96 – 0.97]*	0.98 [0.98 – 0.99]*
T3	0.98 [0.97 – 0.98]*	0.98 [0.97 – 0.99]*	0.99 [0.99 – 1.00]	0.99 [0.98 – 1.00]*
Altitude T2	1.04 [1.03 – 1.05]*	1.06 [1.05 – 1.06]*	1.00 [1.99 – 1.00]	1.02 [1.01 – 1.03]*
T3	1.03 [1.02 – 1.03]*	1.06 [1.05 – 1.07]*	0.97 [0.97 – 0.98]*	1.00 [0.99 – 1.00]
CVD mortality				
Population density T2	1.01 [1.00 – 1.02]	1.07 [1.05 – 1.08]*	0.95 [0.94 – 0.96]*	0.99 [0.98 – 1.00]
T3	1.02 [1.01 – 1.03]*	1.08 [1.06 – 1.09]*	0.97 [0.96 – 0.98]*	1.01 [0.99 – 1.02]
Minor Road Density T2	1.05 [1.03 – 1.06]*	1.09 [1.08 – 1.11]*	0.97 [0.95 – 0.98]*	1.00 [0.99 – 1.01]
T3	1.06 [1.04 – 1.07]*	1.11 [1.09 – 1.12]*	0.98 [0.97 – 0.99]*	1.00 [0.99 – 1.01]
Junction Density T2	1.08 [1.07 – 1.09]*	1.08 [1.06 – 1.09]*	1.07 [1.06 – 1.09]*	1.05 [1.05 – 1.06]*
T3	1.11 [1.10 – 1.12]*	1.14 [1.13 – 1.15]*	1.07 [1.06 – 1.09]*	1.05 [1.04 – 1.07]*
% pop close to road T2	0.97 [0.96 – 0.98]*	1.00 [0.98 – 1.01]	0.97 [0.96 – 0.98]*	1.00 [0.99 – 1.01]

T3	1.05 [1.04 – 1.06]*	1.08 [1.07 – 1.09]*	1.01 [1.00 – 1.03]*	1.02 [1.01 – 1.03]*
Shannon Diversity T2	0.99 [0.98 – 1.00]	1.02 [1.01 – 1.04]*	0.97 [0.96 – 0.98]*	1.00 [0.99 – 1.01]
T3	1.00 [0.99 – 1.02]	0.99 [0.98 – 1.00]	1.03 [1.02 – 1.05]*	1.01 [0.99 – 1.02]
Altitude T2	1.02 [1.01 – 1.04]*	1.04 [1.03 – 1.05]*	0.99 [0.98 – 1.01]	0.99 [0.98 – 1.00]
T3	1.03 [1.02 – 1.04]*	1.07 [1.05 – 1.08]*	0.99 [0.98 – 1.00]	0.99 [0.98 – 1.01]
Traffic accident mortality				
Population density T2	0.90 [0.77 – 1.05]	0.96 [0.88 – 1.05]	0.90 [0.76 – 1.07]	0.91 [0.83 – 1.00]
T3	0.87 [0.74 – 1.02]	0.84 [0.77 – 0.92]*	0.88 [0.75 – 1.05]	0.80 [0.72 – 0.88]*
Minor Road Density T2	0.87 [0.74 – 1.02]	0.98 [0.90 – 1.06]	0.85 [0.71 – 1.02]	0.89 [0.80 – 0.99]*
T3	0.85 [0.73 – 1.00]*	0.81 [0.74 – 0.88]*	0.86 [0.72 – 1.04]	0.70 [0.63 – 0.77]*
Junction Density T2	0.91 [0.79 – 1.08]	1.03 [0.95 – 1.12]	0.92 [0.77 – 1.10]	0.97 [0.88 – 1.07]
T3	0.96 [0.83 – 1.11]	0.93 [0.86 – 1.01]	0.95 [0.80 – 1.13]	0.83 [0.75 – 0.92]*
% pop close to road T2	0.79 [0.67 – 0.92]*	1.00 [0.92 – 1.09]	0.74 [0.63 – 0.88]*	1.02 [0.93 – 1.12]
T3	0.95 [0.82 – 1.10]	0.96 [0.89 – 1.04]	0.96 [0.82 – 1.12]	0.93 [0.86 – 1.02]
Shannon Diversity T2	1.09 [0.95 – 1.26]	1.11 [1.03 – 1.20]*	1.10 [0.95 – 1.27]	1.11 [1.03 – 1.20]*
T3	1.18 [1.00 – 1.40]	1.13 [1.03 – 1.24]*	1.15 [0.96 – 1.38]	1.16 [1.05 – 1.28]*
Altitude T2	0.82 [0.70 – 0.97]*	0.81 [0.74 – 0.89]*	0.80 [0.68 – 0.95]*	0.80 [0.73 – 0.87]*
T3	0.84 [0.73 – 0.98]*	0.98 [0.90 – 1.06]	0.84 [0.72 – 0.99]*	0.96 [0.88 – 1.05]