## **Supplementary materials**

**Table S1.** The effect of TRAP exposure ( $NO_2$  exposure and living less than 200 metres from a major road from 45 to 50 years) on raw values of lung function adjusted for sex, age, height and other confounding variables (restricted to non-movers, n = 709).

	Adjusted †			
NO <sub>2</sub> exposure	β (ml)	95% CI (ml)	P	
FEV <sub>1</sub>	-1.53	-33.31, 30.25	0.93	
FVC	-4.18	-41.50, 33.13	0.83	
FEV <sub>1</sub> /FVC	0.65	4.97, 3.66	0.77	
< 200 m	β	95% CI	P	
FEV <sub>1</sub>	-101.14	-175.17, -27.10	0.01	
FVC	-94.47	-180.41, -8.53	0.03	
FEV <sub>1</sub> /FVC	0.01	0.02, 0.00	0.05	

<sup>†</sup> adjusted for age, sex, height, socio economic status, smoking status, rural/urban location, type of cooking and type of heating.  $\beta$  is given per IQR increase in mean annual NO<sub>2</sub> exposure (i.e. 2.4 ppb).

**Table S2.** Mean annual  $NO_2$  levels at residential addresses less and greater than 200 metres from a major road for those who had a geocoded residential address at the ages 45 and 50 years (N=709).

Follow up	Mean annual NO <sub>2</sub> level	P*	
	< 200 m from a major	> 200 m from a major	
	road (ppb)	road (ppb)	
45 years – range	3.0 – 23.8 (6.7)	2.4 – 16.2 (4.9)	<0.0001
(mean)			
50 years – range	2.4 – 23.0 (5.9)	1.8 – 15.5 (4.1)	< 0.0001
(mean)			

<sup>\*</sup>z test to compare means of  $NO_2$  exposure in two groups (<200 m & >200m)

**Table S3.** The effect of TRAP exposure ( $NO_2$  exposure and living less than 200 metres from a major road from 45 to 50 years) on current asthma, current wheeze and lung function additionally adjusted for sample weights (restricted to non-movers, n = 709).

	Adjusted †		
NO <sub>2</sub> exposure	OR	95%CI	p
Current asthma	1.11	0.97, 1.27	0.14
Current wheeze	1.04	0.91, 1.19	0.54
	β	95%CI	p
zFEV <sub>1</sub> *	-0.02	-0.09, 0.04	0.45
zFVC*	0.00	-0.06, 0.06	0.96
zFEV <sub>1</sub> /FVC*	-0.04	-0.10, 0.02	0.17
< 200 m	OR	95%CI	p
Current asthma	1.48	1.07, 2.04	0.02
Current wheeze	1.64	1.20, 2.24	0.00
	β	95%CI	p
$zFEV_1^*$	-0.30	-0.47, -0.14	<0.01
zFVC*	-0.19	-0.34, -0.03	0.02
zFEV <sub>1</sub> /FVC*	-0.19	-0.34, -0.04	0.01

† adjusted for age, sex, height, socio economic status, smoking status, rural/urban location, type of cooking, type of heating and sample weights.  $\beta$  is given per IQR increase in mean annual NO<sub>2</sub> exposure (i.e. 2.4 ppb).