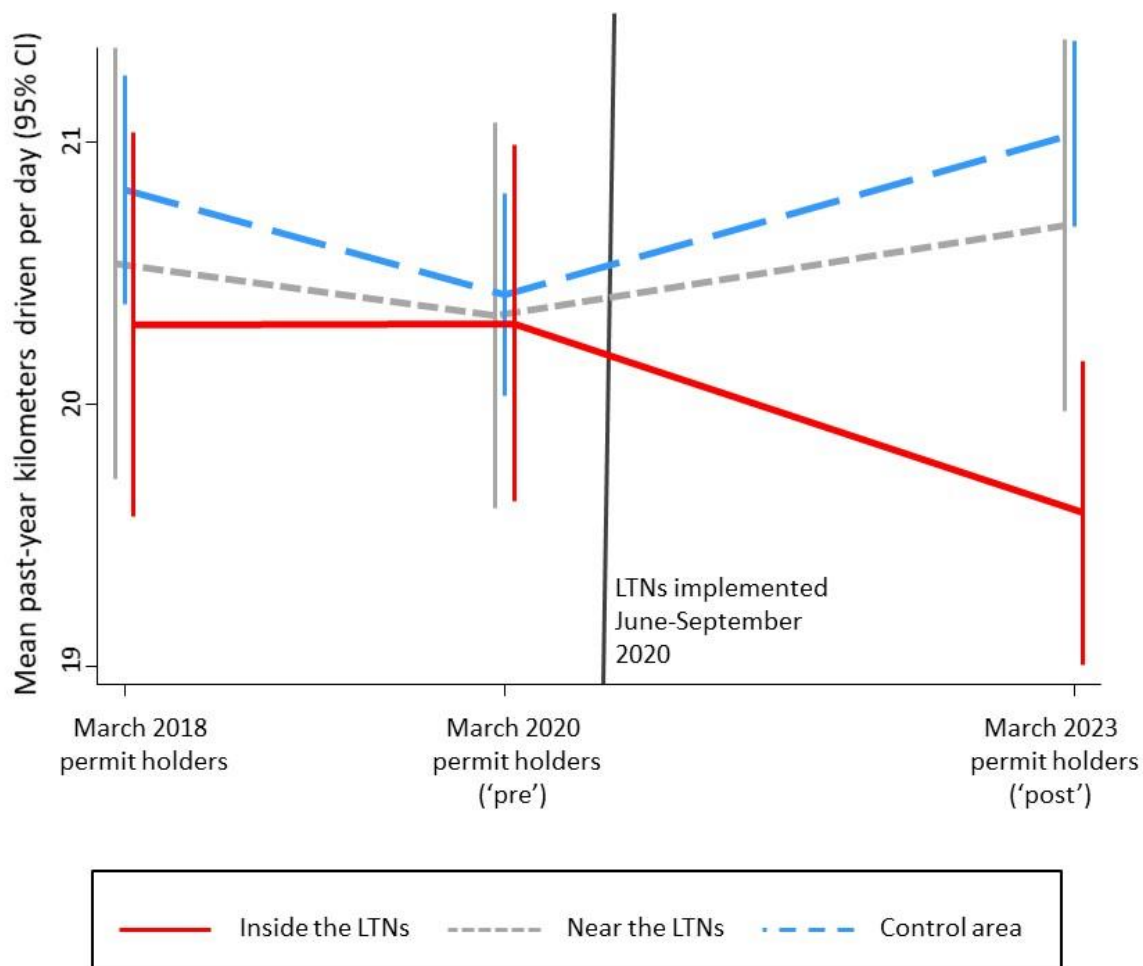


Supplemental Information 3: Additional analyses

Trend over time

Figure A3.1: Mean past-year driving over time among parking permit holders in the areas inside the LTNs, near the LTNs, and in the control area



CI = confidence interval. LTN = Low traffic neighbourhood. Areas defined as shown in Figure 2 of the main text, based on their location relative to the four LTNs implemented June to September 2020. Data tabulated below in Table A3.1

Table A3.1: Mean past-year driving over time among parking permit holders in the areas inside the LTNs, near the LTNs and in the control area

	Inside the LTNs	Near the LTNs	Control area
Mean daily km (SE), 01/03/2016 to 01/03/2018	20.3 (0.4)	20.5 (0.4)	20.8 (0.2)
Mean daily km (SE), 01/03/2018 to 01/03/2020, ('pre')	20.3 (0.3)	20.3 (0.4)	20.4 (0.2)
Mean daily km (SE), 01/03/2021 to 01/03/2023, ('post')	19.6 (0.3)	20.7 (0.4)	21.0 (0.2)

Stratification by area deprivation

Table A3.2: Average daily driving time, pre- and post-LTN implementation: secondary analyses stratifying by area deprivation

Analysis		Inside the LTNs	Control area
Less deprived areas (bottom half for deprivation, relative to all of London)	No. cars and vans in analysis, pre/post	355 / 441	2694 / 3226
	Mean daily km (SE), pre	19.7 (0.7)	20.2 (0.3)
	Mean daily km (SE), post	19.0 (0.6)	21.0 (0.3)
	Change in km (SE), post minus pre	-0.7 (0.9)	0.8 (0.4)
	Difference-in-differences change in km (95% CI), relative to the control area p-value for difference-in-differences effect	-1.5 (-3.6, 0.6) p=0.16	
More deprived areas (top half for deprivation, relative to all of London)	No. cars and vans in analysis, pre/post	1345 / 1584	2829 / 3372
	Mean daily km (SE), pre	20.5 (0.4)	20.6 (0.3)
	Mean daily km (SE), post	19.7 (0.3)	21.0 (0.3)
	Change in km (SE), post minus pre	-0.7 (0.5)	0.4 (0.4)
	Difference-in-differences change in km (95% CI), relative to the control area p-value for difference-in-differences effect	-1.1 (-2.4, 0.2) p=0.09	
	p-value for difference between impacts in less deprived vs more deprived areas	p=0.67	

CI = confidence interval. LTN = Low traffic neighbourhood. km = kilometres. SE = standard error. The 'pre' sample covers cars/vans with an active permit on 1st March 2020, and with two valid MOTs in the window 1st March 2018 to 1st March 2020. The 'post' sample covers cars/vans with an active permit on 1st March 2023, and with two valid MOTs in the window 1st March 2021 to 1st March 2023. Difference-in-differences point estimates, confidence intervals and p-values were calculated as interaction terms in linear regression analyses, with daily km as the outcome and fitting an interaction term between pre/post status and LTN status. P-values testing for the impact of deprivation status on the pre/post effect of LTNs were calculated by fitting a three-way interaction (pre/post status * LTN status * deprivation status) and using likelihood ratio tests to examine whether model fit was improved relative to a model with only the two-way interaction term (pre/post status * LTN status, with deprivation status as a covariate). To facilitate interpretation of this 3-way interaction term, the analysis in Table A3.2 is restricted to cars/vans inside the LTNs and in the control areas, i.e., excluding the 'near the LTNs' areas. In comparable analyses that instead included the 'near the LTNs' areas and excluded the 'inside the LTNs' areas, there was likewise no evidence of an interaction with area deprivation relative to the control group (p=0.63).