

# How Low Traffic Neighbourhoods can reduce motor traffic and improve health

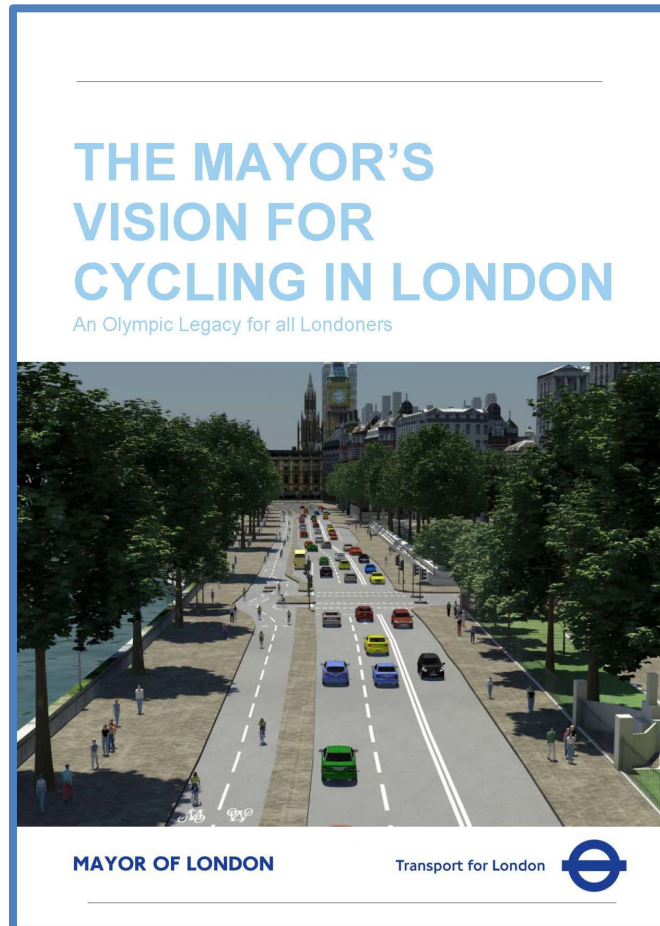
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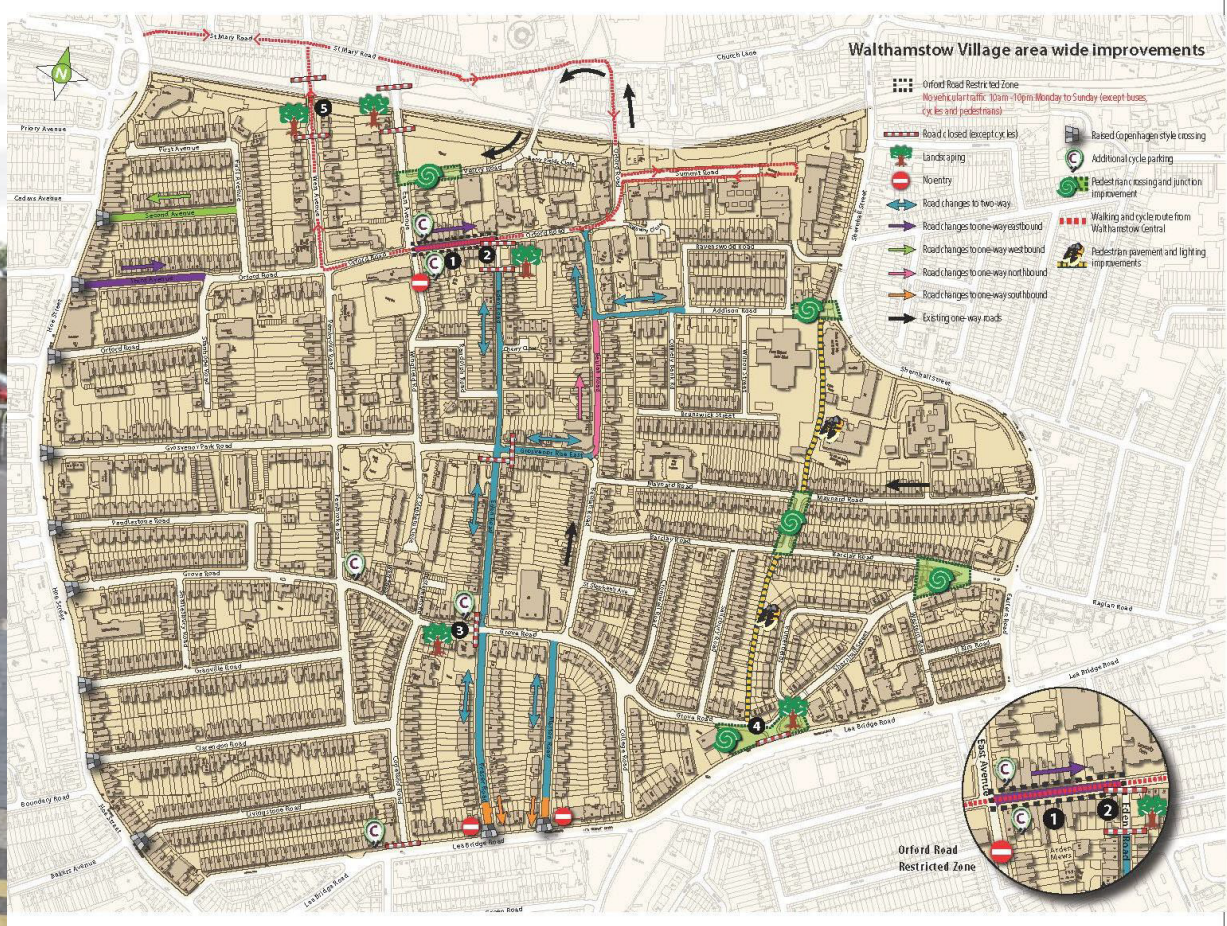
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# THE MAYOR'S VISION AND THE MINI-HOLLAND PROGRAMME



- Around £100m invested in active travel infrastructure in three Outer London boroughs from 2015-21
- Dutch-level investment per head over a period of 5-6 years
- Included Low Traffic Neighbourhoods, which were also built from 2020-elsewhere in London



## LOW TRAFFIC NEIGHBOURHOODS: Schemes for areas

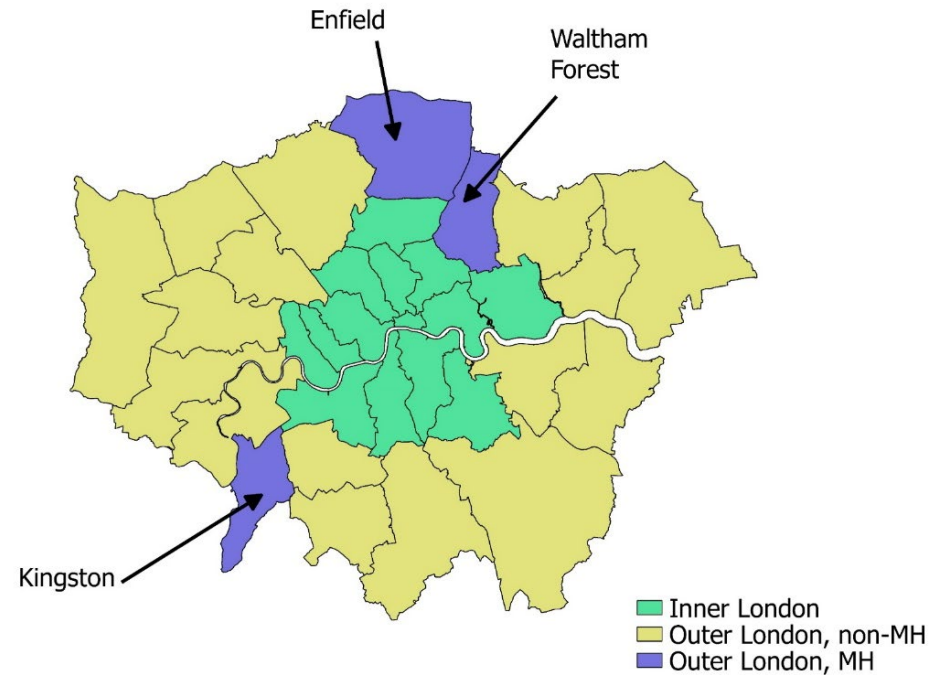
- 'Modal filters' block motor traffic but not walking/cycling, or other permitted uses (e.g. Blue Badge)
- Can be physical or camera gates, including bus gates
- Sometimes new one- or two-way working
- High streets can be included
- **Aim to remove through motor traffic from neighbourhood**



ORFORD RD. W10

# THE PEOPLE AND PLACES SURVEY (2016-21)

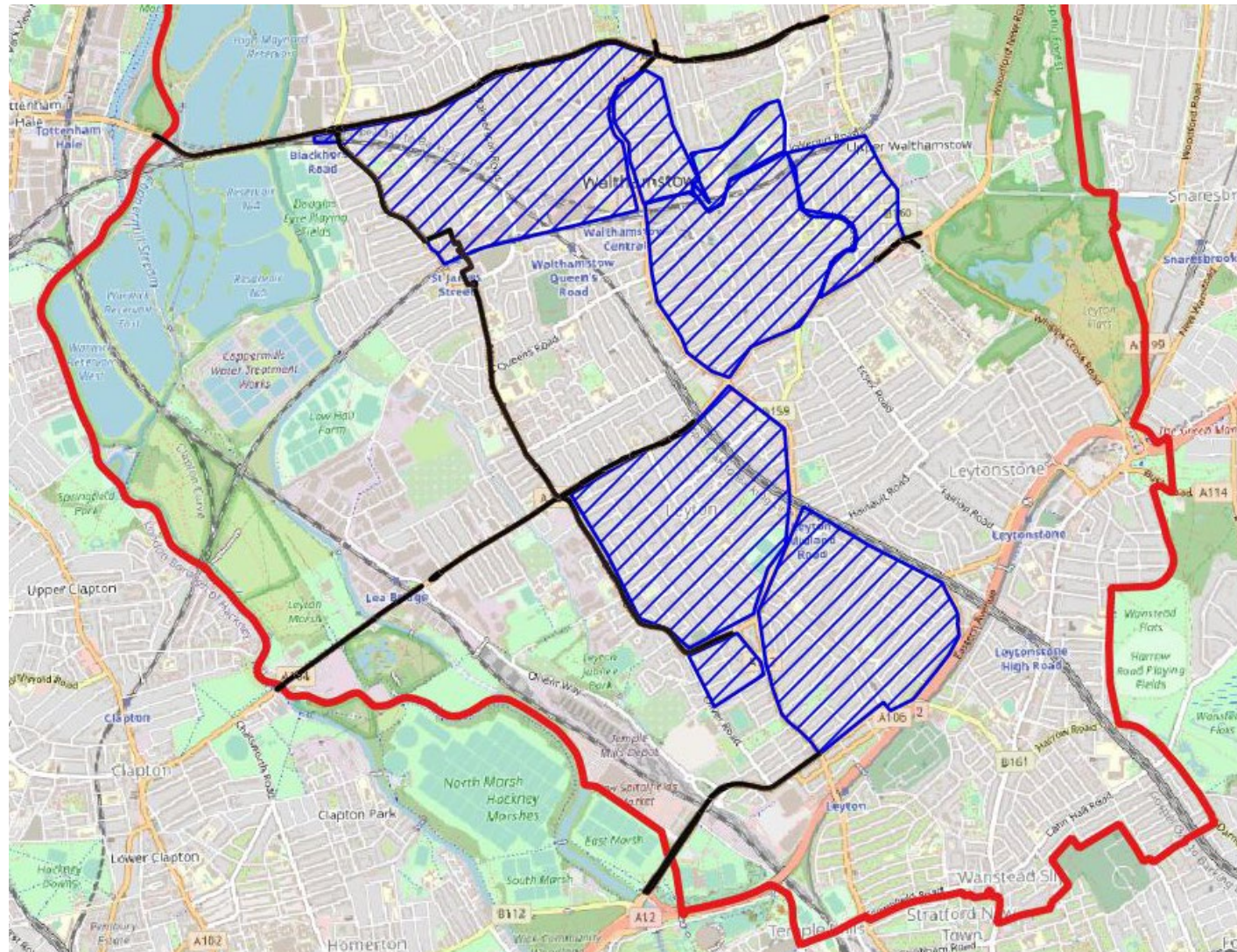
- **The main primary source for our LTN research.**
- **Longitudinal study with c.1500 Outer Londoners participating annually at each of Waves 1-5.**
- **Uses a 'natural experiment' approach to examine whether and how proximity to mini-Holland interventions is associated with changes in travel behaviour and attitudes and change in attitudes to the local environment.**



*Study funded by TfL and led by Westminster University*

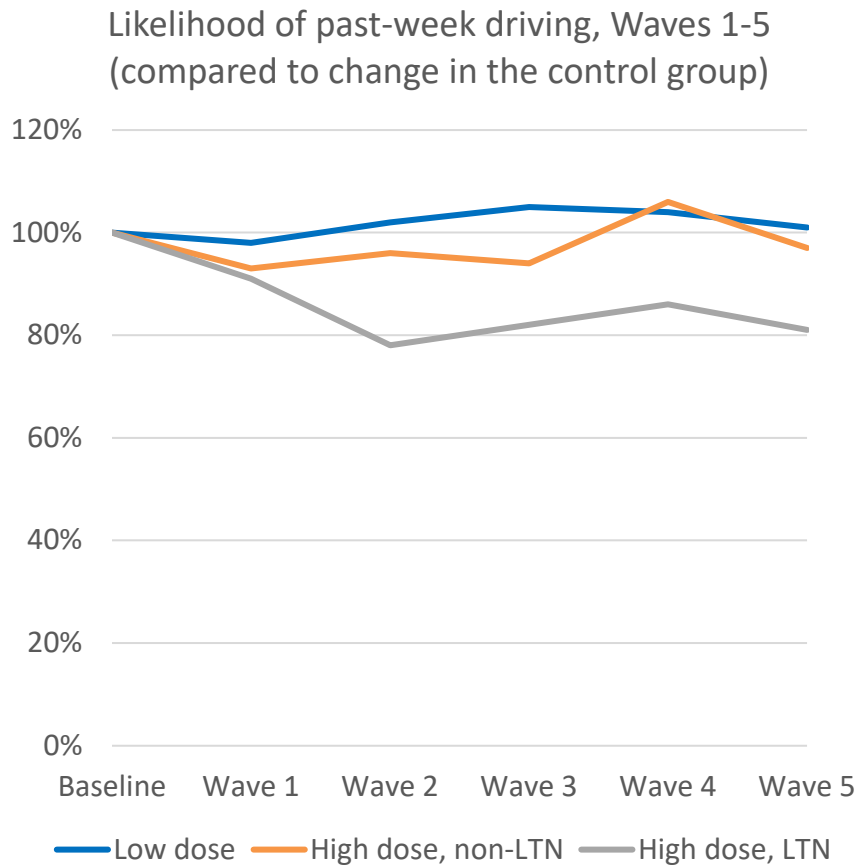
Results published at most recently <https://www.sciencedirect.com/science/article/pii/S2214140524000173> also e.g. <https://www.sciencedirect.com/science/article/pii/S2214140520301626>, <https://findingspress.org/article/17128>, <https://findingspress.org/article/21390>, <https://www.sciencedirect.com/science/article/pii/S0965856417314866>

# LTNS IN WALTHAM FOREST: 2015-



- Map shows some of the LTNs introduced in the South of the borough (shaded in blue) and new cycle tracks (in black), part way through the study

# LTN AREAS SAW REDUCED LIKELIHOOD OF RESIDENTS DRIVING



The People & Places survey data showed trends towards reduced car ownership and/or use in the LTN areas, especially at Wave 2 onwards, although not all trends are statistically significant every year.

The decline in past-week car use, for instance, is around 20% each year from Wave 2 onwards.

### **Definitions**

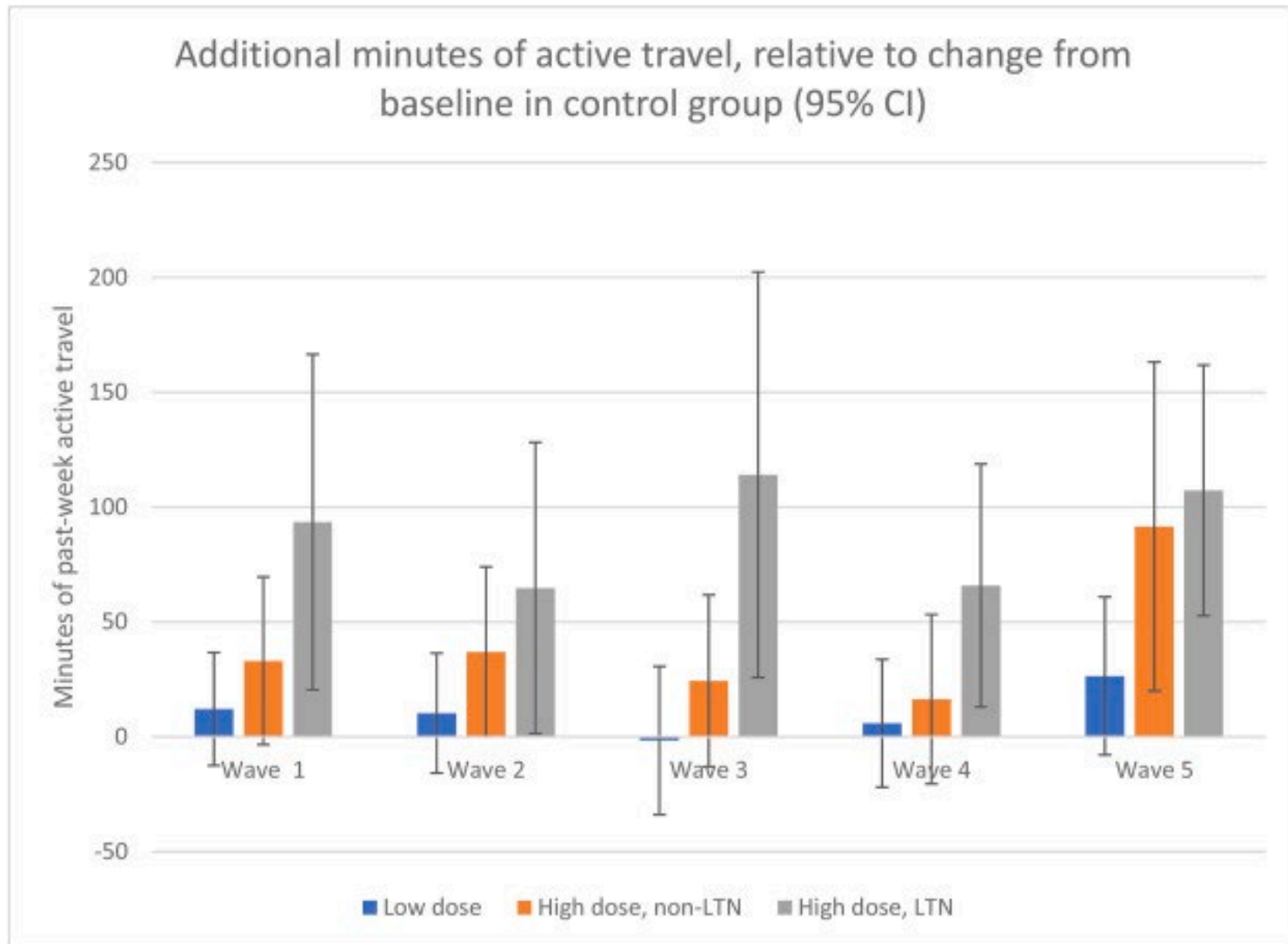
*Low-dose – MH borough but not near any schemes*

*High-dose, non-LTN – living near active travel scheme/s – such as a new cycle track - but not in an LTN*

*High-dose, LTN – living in an LTN (usually also near to other active travel schemes)*

*Changes are all compared to changes in control group in other Outer London boroughs*

# LTN AREAS SAW SUBSTANTIAL GROWTH IN ACTIVE TRAVEL



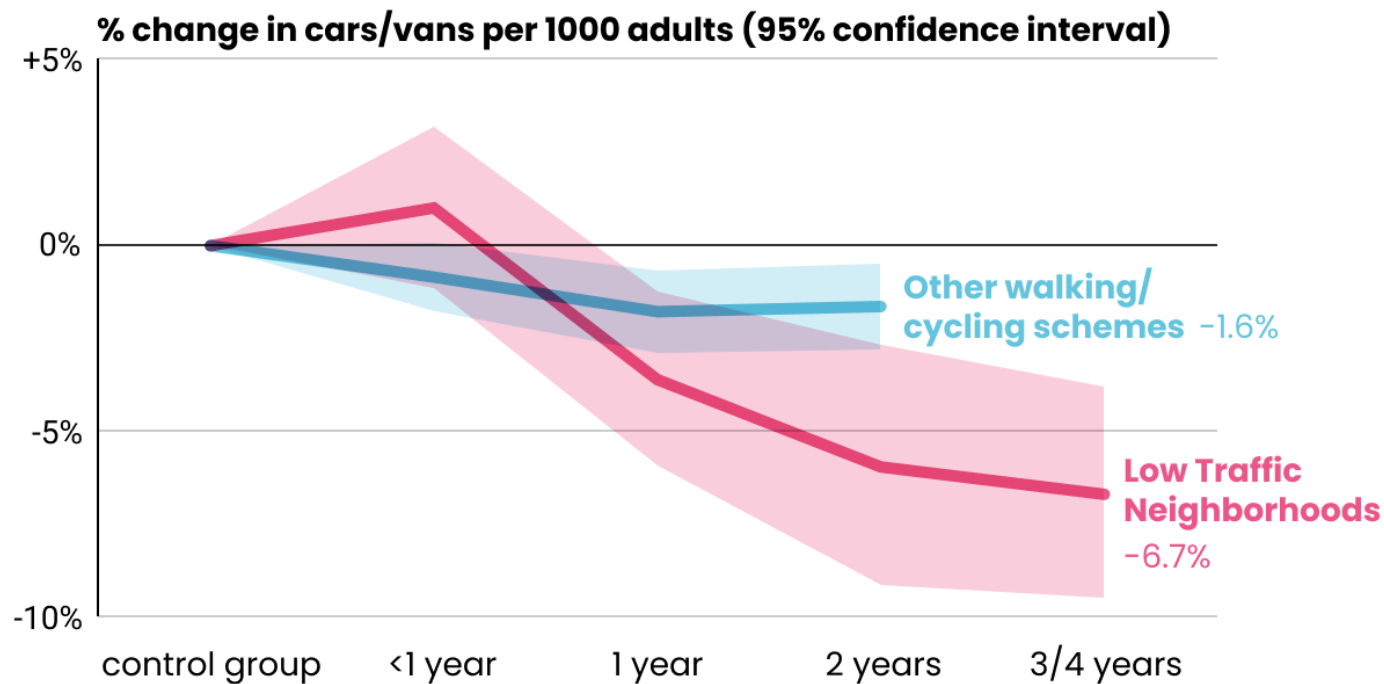


# THE MINI-HOLLAND PROGRAMME GENERATED LARGE HEALTH ECONOMIC BENEFITS

- The high-dose 'mini-Holland' area generated over 20 years a health economic benefit of £1,056m, of which £821m came from reduced mortality due to additional physical activity.
- The total health economic benefit is around ten times the programme cost.
- Each year, there are 37 deaths avoided and 753 years of life lost (YLL) avoided, with 535,421 sick days avoided.
- For the LTN areas within the mini-Holland boroughs, the health economic benefit is £443m, around 40% of the whole programme benefit.

# LTN AREAS SAW REDUCED CAR OWNERSHIP

The number of cars or vans registered in Waltham Forest LTNs dropped 6% after two years, which is consistent with the survey data suggesting decline in car ownership and/or use.

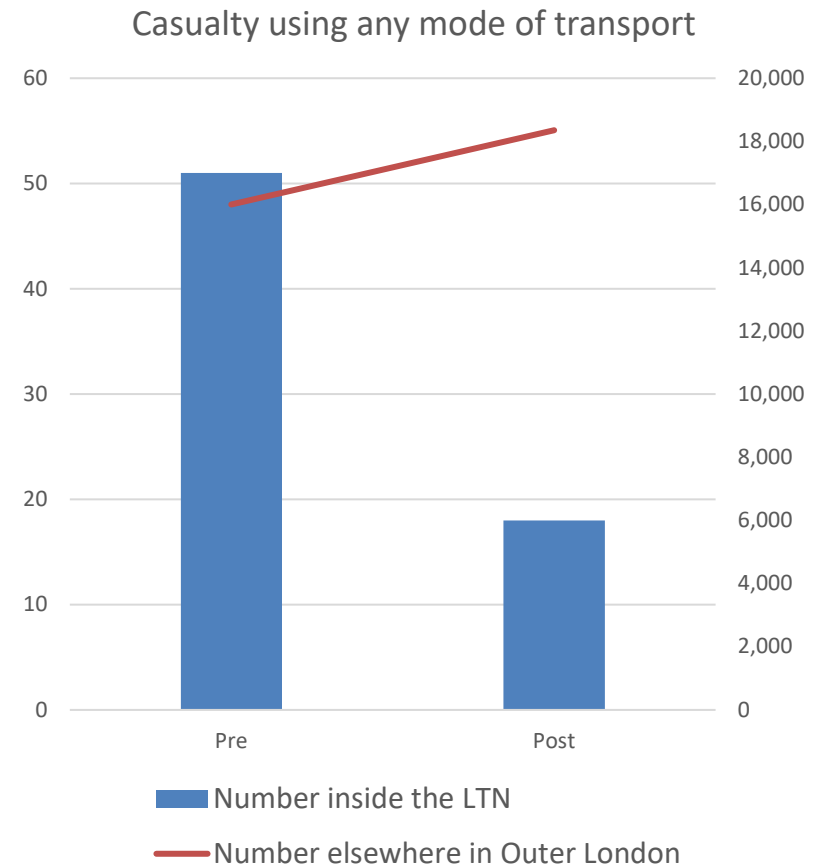


# LTN AREAS SAW REDUCED ROAD INJURIES

Approximately a 70% reduction in road traffic injury risk per trip on roads within these LTNs, for pedestrians, cyclists, and car occupants alike.

No negative impact found on LTN boundary roads

<https://doi.org/10.32866/001c.18330>

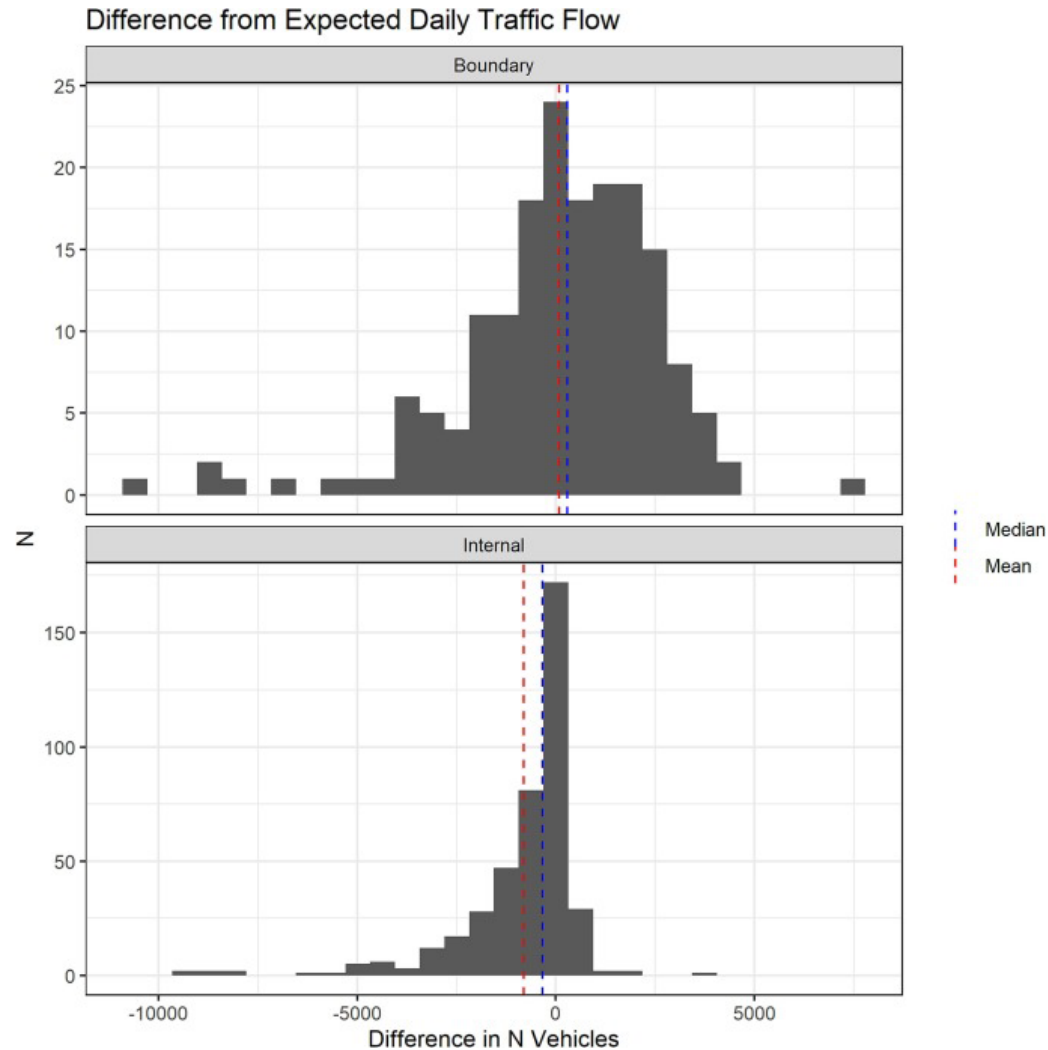


# PAN-LONDON EMERGENCY LTNS



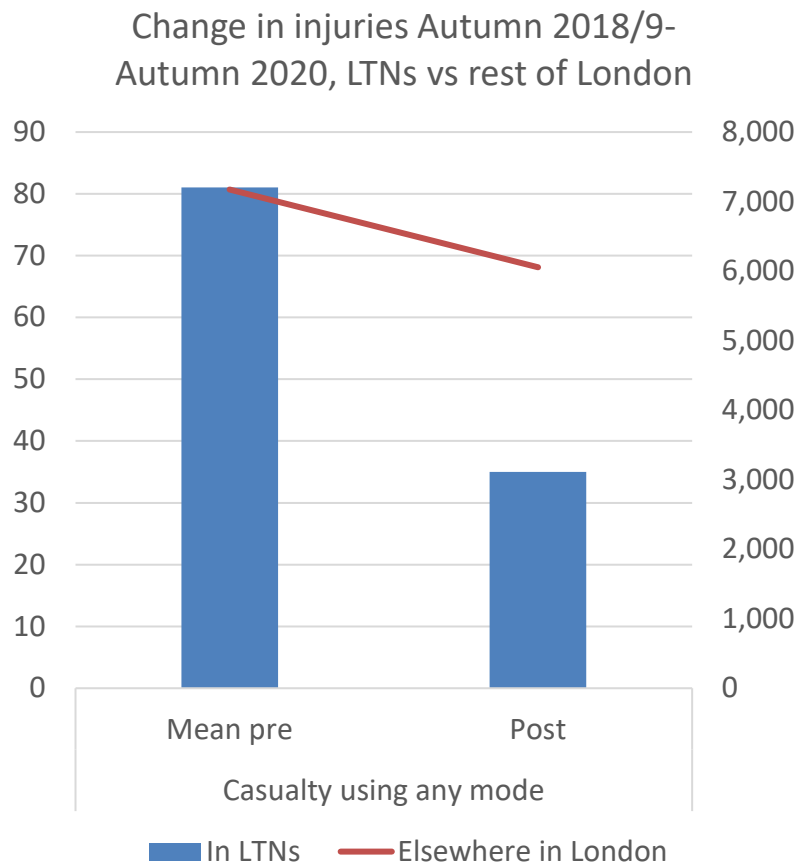
We have also been studying more recent ‘emergency’ LTNs introduced in 2020-1 across London. This has included incorporating them within the TfL-funded ‘People and Places’ longitudinal study of Outer Londoners, and research specifically looking at their impacts using e.g. road injury data.

# CHANGES IN MOTOR TRAFFIC IN 2020-1 LTNs



Systematic review of local authority monitoring data, published as  
<https://www.sciencedirect.com/science/article/pii/S2213624X23001785>

# LTN AREAS SAW REDUCED ROAD INJURIES



Injuries halved by comparison to the background trend, and again we found no statistically significant change in injuries on LTN boundary roads. This time it was pedestrian injury reduction driving the change.

<https://findingspress.org/article/25633-impacts-of-2020-low-traffic-neighbourhoods-in-london-on-road-traffic-injuries>

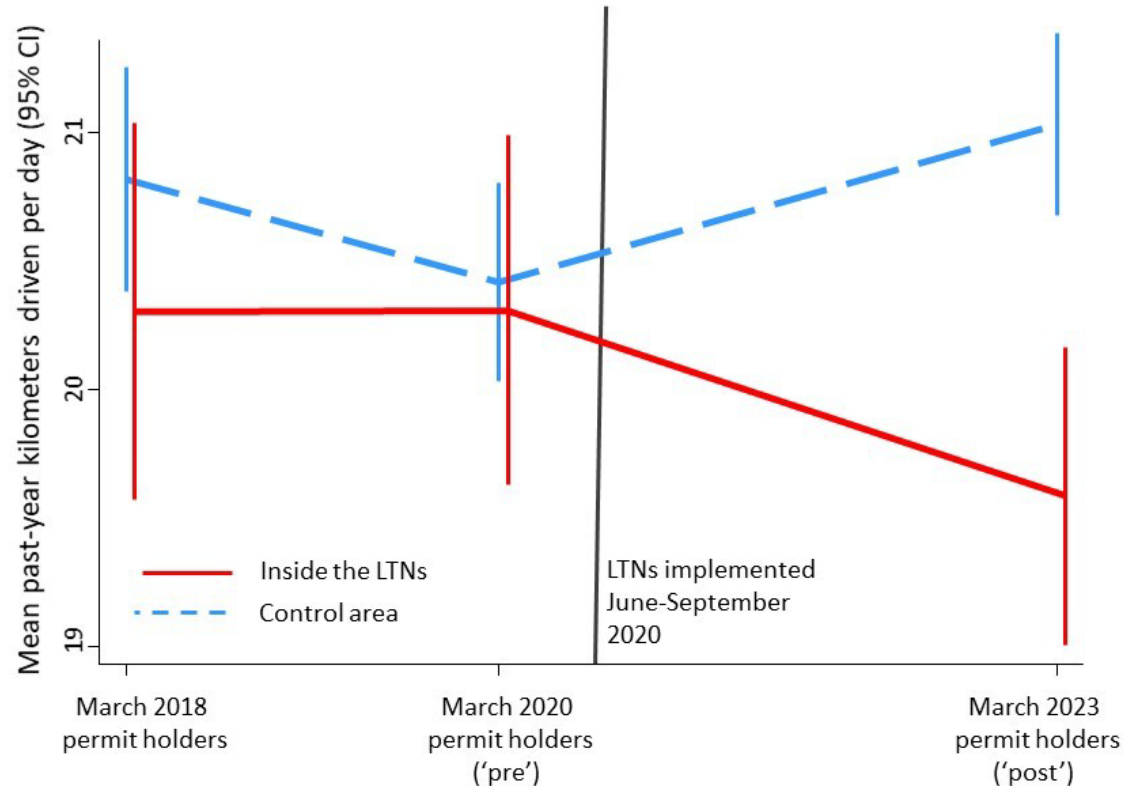
# LAMBETH LTNS: REDUCED DRIVING

**Our findings suggest that residents started driving less once their area became an LTN.**

We examined how residents' driving changed after the implementation of LTNs in Lambeth, London. We used postcode plus numberplate data from controlled parking zones, matched to annual MOT records.

From 2018-2020 ('pre') to 2021-2023 ('post'), mean average past-year driving decreased by 0.7km/day among residents living inside the new LTNs and increased by 0.6km/day among residents in control areas elsewhere in Lambeth.

This is a relative decrease of 1.3km/day in LTN versus control areas, or a 6.4% relative decrease.



# YANG ET AL STUDY – LOWER POLLUTION

- Yang et al used Nitrogen Dioxide data and traffic volume counts to examine the effects of three LTNs in Islington. They found:
- LTNs reduced NO<sub>2</sub> both within intervention areas (5.7%) and in boundary areas (8.9%)
- Traffic volumes were reduced by 58.2% within LTNs and by 13.4% at LTN boundary sites.



Yang et al, 2022,  
<https://pdf.sciencedirectassets.com/271737/1-s2.0-S1361920922X00126/1-s2.0-S1361920922003625/>



# SUMMARY

- Motor traffic levels generally reduce inside LTNs in London, with no systematic pattern on boundary roads.
- The LTNs have led to more walking and cycling, with some evidence of reduced driving and car ownership.
- There is some evidence of reduced air pollution both inside LTNs and on boundary roads.



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