

## London's Low Traffic Neighbourhoods: an emerging evidence base

This short report summarises new and emerging evidence on Low Traffic Neighbourhoods, and how they fit into wider transport planning goals.

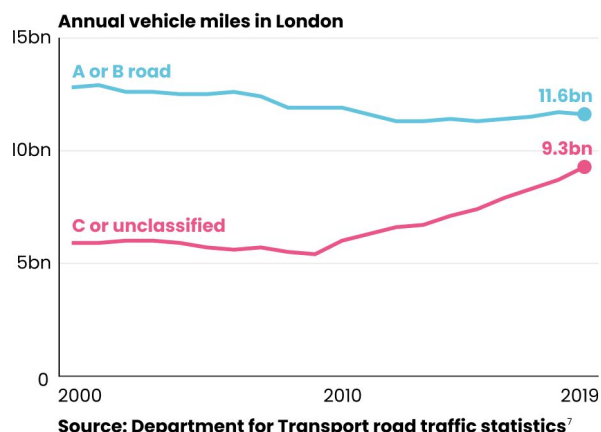
### Car use is harming us all, particularly marginalised groups and those without cars

**Car use harms health, the environment, and society.** In 2019, 30,007 Londoners were recorded by police as having been injured in road collisions, with 3,780 of those injuries judged serious, and 125 deaths.<sup>1</sup> Motor traffic is a major contributor to air pollution,<sup>2</sup> which causes an estimated 9,500 early deaths in London annually.<sup>3</sup> Traffic noise additionally increases the risk of stroke and premature death.<sup>4</sup>

**Groups least likely to use motor vehicles are most likely to be harmed by them.** For instance, disabled Londoners and those with health conditions make 32% fewer car trips each day than other Londoners.<sup>5</sup> Yet as pedestrians, disabled people are five times more likely to be injured by a motor vehicle than non-disabled people.<sup>6</sup>

### Unsustainable traffic growth – and how to stop it

**“London’s road network is increasingly hosting more traffic than it has the capacity to cope with.” – London Assembly, 2017<sup>8</sup>**



Over the last ten years, motor traffic in London **started rising after a decade of decline**. The growth has all been on C or unclassified roads (i.e. mostly local residential streets), while A and B road traffic fell slightly. Much of this increase is likely to be due to sat-nav systems turning residential streets into cut-throughs that allow drivers to avoid main roads.

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What to do? We can learn from London's recent history. Between 1993 and 2013, car use fell from 50% to 37% of trips.<sup>9</sup> In 1993 there were twice as many car trips as public transport trips, while by 2013 the numbers were equal. Reasons for this change included the congestion charge, pedestrianisation, improved public transport (e.g. bus lanes), and cheaper fares. Policies had started to make driving less attractive, and alternatives better – mixing 'sticks' and 'carrots'. For example, the congestion charge (a 'stick') funded bus investment (a 'carrot').

**There is no 'natural' level of car use. The level, and harms, depend on decisions taken by policy-makers.**



## **Where Low Traffic Neighbourhoods (LTNs) fit in**

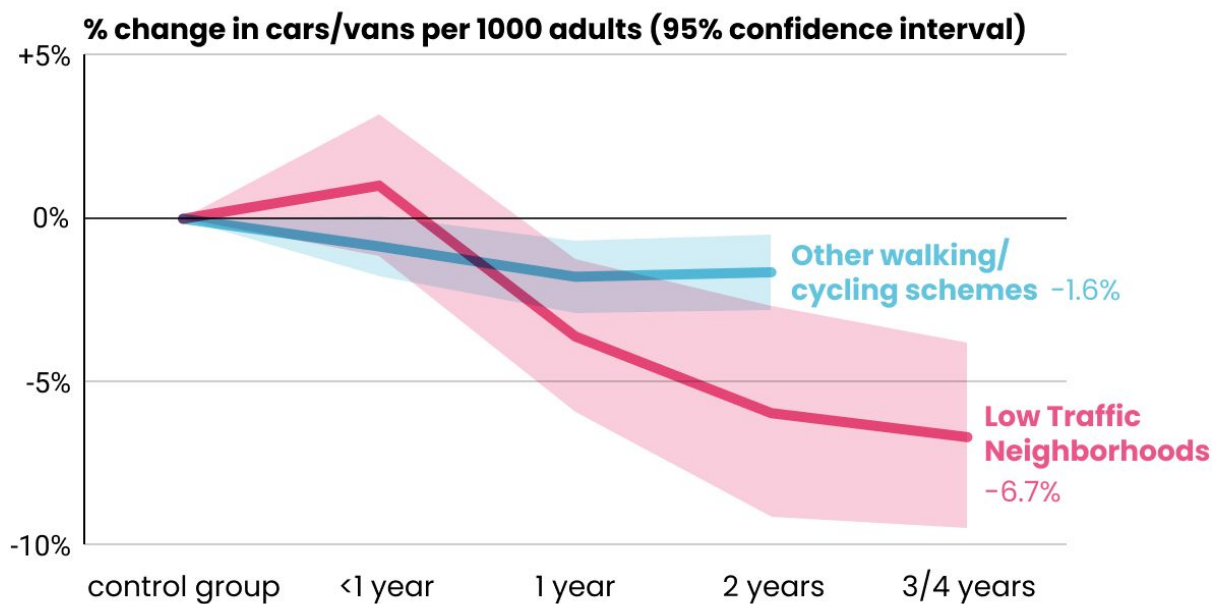
LTNs use bollards, planters, and cameras ('modal filters') to remove through motor traffic from neighbourhoods, while retaining motor vehicle access to all homes. **They are both 'carrot' and 'stick', seeking to make walking and cycling more pleasant and safer, while making journeys by car a little bit less convenient.** The approach is a mainstay of Dutch transport planning (called 'unbundling', expressing the aim of removing much motor traffic from local walking and cycling networks), and has contributed to high levels of cycling and cycle safety in the Netherlands.<sup>10</sup>

LTNs do not suit all streets. We are unlikely to be able to remove through motor traffic from major roads, 12% of road length in London.<sup>11</sup> LTNs do not replace the need for city-wide pollution and speed control measures, or main road interventions like bus lanes or cycle tracks. However, **91% of Londoners live on residential roads, and this varies little by age, gender, income, disability, and ethnicity.**<sup>12</sup> Evidence so far suggests LTNs can play a key role in reducing car ownership and use, while improving health and transforming residential neighbourhoods.

## Impact of Waltham Forest's Low Traffic Neighbourhoods

Waltham Forest is a useful case study because it started creating LTNs in 2015, giving time to study them in detail. All studies below are longitudinal studies using the rest of outer London as a control. They find:

- **More walking and cycling.** After three years, LTN residents did 115 minutes more walking per week and 20 minutes more cycling. These effects were much larger than in areas getting other walking or cycling schemes without an LTN.<sup>13</sup> Such changes are expected to make a substantial contribution to the ability of residents to meet the World Health Organisation's recommendation for 150 minutes of physical activity per week.
- **Substantially reduced car ownership.** The number of cars or vans registered in LTNs dropped 6% after two years. Again, this effect was much larger than that seen in areas getting other walking or cycling schemes, where car ownership dropped by 2% after two years – although even 2% is good news.<sup>14</sup> This accords with survey evidence of decreased car ownership and use among LTN residents.<sup>13</sup>



"These are such impressive effects. In our evaluation studies we quite often see increases in active travel, although not usually as big as this. It is less common for us to find a mode shift away from cars. An effect of this size is unprecedented in our own sustainable transport research, and very unusual in the literature."

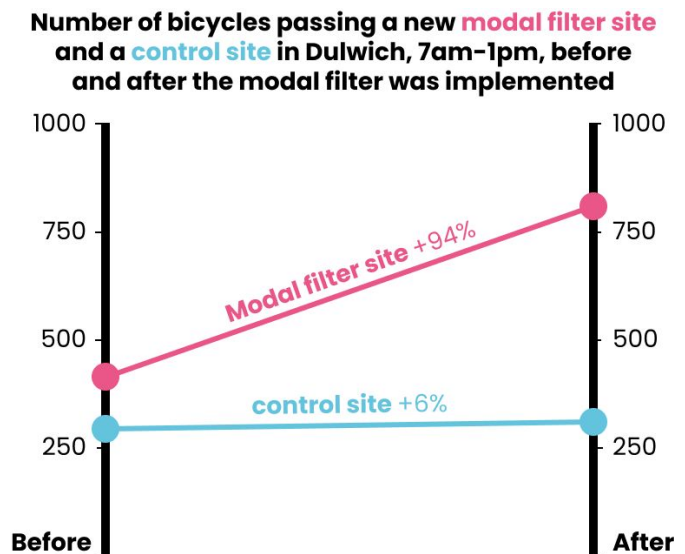
- **Dr Anna Goodman, author**

- **Substantially improved road safety.** Approximately a 70% reduction in road traffic injury risk per trip on roads within the LTNs, for pedestrians, cyclists, and car occupants alike. No negative impact on boundary roads.<sup>15</sup>
- **A reduction in street crime.** A 10% reduction in street crime inside the LTNs, with larger decreases for violent crime. This effect increased over time, with an estimated 18% reduction after 3 years. No crime displacement to adjacent areas.<sup>16</sup>
- **No negative impact on emergency response.** Fire Brigade response times were unchanged inside LTNs, and slightly faster on boundary roads. This lack of negative impact is in line with the views of the London Fire Brigade borough commander.<sup>17</sup>

## Research related to LTNs implemented in London in 2020

**More deprived areas are more likely to benefit from LTNs.** Four percent of Londoners (several hundred thousand people) live in an LTN implemented between March and September 2020. Across London, people in the most deprived quarter of neighbourhoods are almost three times as likely to live a new LTN, compared to Londoners in the least deprived quarter.<sup>18</sup> This varies by borough, however, and 12 boroughs have no LTNs implemented during that period.

**Cycling doubles in Dulwich.** Manual counts indicated that between 2018 and 2020 the number of cyclists doubled around a new modal filter in Dulwich, relative to a control site. The estimated number of children cycling to school increased by seven times.<sup>19</sup>



**Possible** is a UK based climate charity working towards a zero carbon society, built by and for the people of the UK. [www.wearepossible.org](http://www.wearepossible.org)

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## References

1. <http://content.tfl.gov.uk/casualties-in-greater-london-2019.pdf>
2. <https://doi.org/10.1016/j.chest.2018.10.042>
3. [https://www.london.gov.uk/sites/default/files/HIAinLondon\\_KingsReport\\_14072015\\_final\\_0.pdf](https://www.london.gov.uk/sites/default/files/HIAinLondon_KingsReport_14072015_final_0.pdf).  
Air pollution is estimated to cause up to 141,000 years of life lost in London per year, which is calculated 'equivalent' to 9,500 early deaths.
4. <https://doi.org/10.1093/eurheartj/ehv216>
5. <http://content.tfl.gov.uk/technical-note-14-who-travels-by-car-in-london.pdf>
6. <https://doi.org/10.1016/j.jth.2018.03.006>
7. <https://roadtraffic.dft.gov.uk/regions/6>
8. [https://www.london.gov.uk/sites/default/files/london\\_stalling\\_-\\_reducing\\_traffic\\_congestion\\_in\\_london.pdf](https://www.london.gov.uk/sites/default/files/london_stalling_-_reducing_traffic_congestion_in_london.pdf)
9. <http://content.tfl.gov.uk/travel-in-london-report-7.pdf>
10. <https://doi.org/10.18757/ejtir.2013.13.3.3000>
11. <https://www.gov.uk/government/statistical-data-sets/road-length-statistics-rdl>, dataset RDL0201
12. <https://www.wearepossible.org/LTN-report>
13. <https://doi.org/10.32866/001c.17128>
14. <https://doi.org/10.32866/001c.18200>
15. <https://doi.org/10.32866/001c.18330>
16. <https://osf.io/preprints/socarxiv/ftm8d/>
17. <https://doi.org/10.32866/001c.18198>
18. New analysis including data from <https://www.wearepossible.org/LTN-report>. Pre-print available at the end of January 2021.
19. [https://www.transportforqualityoflife.com/u/files/1\\_DulwichReport\\_FINAL.pdf](https://www.transportforqualityoflife.com/u/files/1_DulwichReport_FINAL.pdf)

## Credits

LTN 'Road open' sign design by **Sarah Berry, Simon Still & Robert Johnstone**.

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