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Street Shift: The Future of Low-Traffic Neighbourhoods

Nicolas Bosetti, Kieran Connelly, Claire Harding and Denean Rowe

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About the Authors

Nicolas Bosetti

Nicolas is Head of Data and Insight at Centre for London. He is chiefly interested in cities, governance and regional economic development, and at Centre for London he has co-authored reports on inequality and social mobility, city planning, and sustainable transport. Nicolas has an MSc in Urban Policy.

Kieran Connelly

Kieran worked as a Research Assistant at Centre for London. Before joining the Centre in 2021, he was an election agent and strategist in local government elections. Kieran is also a volunteer tutor/mentor for children with chronic health conditions.

Claire Harding

Claire is Research Director at Centre for London. Before joining the Centre she was Head of Research at Coram Family and Childcare, where she led on the annual Childcare Surveys. She previously worked in research and development at digital mental health provider Big White Wall, and in public sector research consultancy. Her research interests include education and opportunity, wellbeing, equalities, and gender.

Denean Rowe

Denean is a Project Manager for the Town and Country Planning Association and Planning Aid for London. Prior to this, she was the Development Manager at Centre for London. Denean is interested in urban design, placemaking and how the built environment can encourage social cohesion and good mental health.

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Foreword

The way we travel and move around is changing.

Policymakers are setting a clear direction of travel – they want to accelerate the shift to a world where car dependency is not the default option in our cities. The evidence is clear. If there are convenient, reliable and affordable alternative options to the private car then people will choose sustainable options.

As policymakers introduce policies to reduce car dependency, vehicle rental has an essential role to play in providing access to a car as and when needed. At Enterprise we see ourselves as a key part of the solution – working with public transport providers and local government to provide convenient, economical and sustainable ways to travel. This includes providing people with access to a vehicle on those journeys where a car or a van are required.

We welcome the focus in this report on the need to think holistically about mobility. Simply banning cars from a particular area will not create the long-term shift in behaviour that we need to see. The evidence shows that a majority of residents strongly welcome reduced traffic in their own neighbourhood. But there must be alternative options provided to people who rely on their own car. Mobility hubs are one promising example – these enable different modes of transport to come together to make other options than the private car more convenient. Making it easy for people to plan their journeys and providing financial incentives to give up their private car through the widespread use of mobility credits will also be necessary. Only by adopting bold new solutions will we stand any chance of achieving Sadiq Khan's target of a 25% reduction in car use by 2030.

This report is an important contribution to the debate. It is now up to Transport for London and individual Boroughs to provide local communities with the access they need to the full range of sustainable modes of travel. Working hand in glove with the private sector will help to ensure we deliver the greener and cleaner London that we all wish to see.

Andy Bland, Head of Sales, South East England and London, Enterprise Holdings

Summary

Since their implementation in London during the COVID-19 pandemic, Low-Traffic Neighbourhoods (LTNs) have faced vocal opposition for three main reasons:

- Some Londoners feel they are being inconvenienced without having a credible alternative to driving.
- They feel that the rapid implementation of LTNs excluded them from decision making, and hold that the schemes are of poor quality as a result.
- They see LTNs as ineffective – and even unfair – because they can displace traffic onto nearby roads.

But low-traffic neighbourhoods are not as divisive as people often say…

- 47 per cent of Londoners support LTNs, and 16 per cent oppose them – while 37 per cent don't have a strong opinion or just don't know about them.
- More people support LTNs than oppose them: this is true for men and women and across all age groups, educational backgrounds and party allegiances – though levels of support and opposition vary.
- People who own a car are more likely to support the introduction of low-traffic neighbourhoods than people who don't.
- People who live in low-traffic neighbourhoods are more likely to be supportive of them – which suggests that people tend to like them once they have become familiar.
- However, many Londoners are not convinced that low-traffic neighbourhoods reduce overall traffic. 42 per cent think they displace cars elsewhere, although 32 per cent think they reduce the overall number of cars on the road; 25 per cent don't know.

There is strong evidence that low-traffic neighbourhoods can:

- Reduce motor traffic, which creates a safer environment to walk and cycle.
- Encourage people to take fewer journeys by car, and more by other modes of transport.
- Displace some motor traffic to nearby roads in the short term: however, this tends to reduce in the medium term. There is strong evidence LTNs reduce the overall number of car journeys.

Despite concerns, studies show LTNs don't increase emergency response times or street crime, and across the city, LTNs were more likely to include more deprived areas than wealthier areas. However, there is a great deal of variation from street to street and from one LTN scheme to another.

Good design, engagement and communications can make LTNs more effective and less controversial:

- Street improvements such as wider pavements, trees and greenery can increase the benefits of LTNs.
- Support must be made available for people who are less able to switch to other modes of transport, and there should be plans to mitigate any unintended negative impacts.
- Early and comprehensive public engagement will improve public trust and scheme quality.
- Early engagement with emergency services to update their road knowledge
- Local authorities and the GLA should be clear about local goals and review mechanisms.

LTNs can't tackle the city's dependence on private cars alone. Complementary measures are needed:

- Other changes to street access and layouts, including protected cycle lanes, safer junctions, school streets and traffic calming.
- Changes to pricing, including distance-based road user charging and charges on workplace and residential parking.
- Expand alternatives: develop a denser network of vehicle hire clubs and add new public transport options, while ensuring affordability through scrappage schemes and mobility credits.

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Recommendations

- **The government should give the Mayor of London and the boroughs new powers to raise funds themselves for the delivery of sustainable travel measures such as low-traffic neighbourhoods.**

- **Until new fundraising powers are introduced, the government should make funding available to local authorities and Transport for London so that they can engage residents meaningfully over LTNs and support those who are most impacted with complementary measures.**

- **Local authorities considering implementing an LTN should follow best practice, including engaging early with both the public and emergency services, and introducing other traffic decarbonisation measures – such as controls on parking or offering alternative mobility solutions.**

- **The Mayor of London should call on local authorities to maximise coverage of low-traffic neighbourhoods or similar schemes in their areas.**

- **London Councils and Transport for London should create an LTN Knowledge Hub that helps boroughs learn from each other's experiences. The Hub should be open so the public and local campaign groups can access it too.**

Underlying recommendations

- **The government should give Transport for London a long-term funding settlement.**

- **The government should let boroughs enforce speed limits, after consultation with Transport for London**

Introduction

In 2020 and 2021, following funding made available by the government, London boroughs introduced 101 low-traffic neighbourhoods.[1] Low-traffic neighbourhoods (LTNs) are created by changing a network of through roads to access-only, thereby stopping people from driving through an area. Although there are many similar schemes in London that predate LTNs, the 2020 LTNs have faced tough opposition – including several town hall protests and vandalism to traffic filters and signs. Some boroughs have since decided to remove some of their schemes – and certain boroughs (such as Harrow and Wandsworth) have scrapped all their low-traffic neighbourhoods.

The problem that low-traffic neighbourhoods seek to address is this: even though car ownership in London has declined in recent years (from 0.83 cars per household in 2003 to 0.74 in 2019),[2] traffic on London's minor roads (defined as neither A roads nor motorways) has significantly increased. Between 2009 and 2019, journeys on minor roads rose from 5.4 to 9.3 billion miles.[3] The reasons for this apparent paradox include the introduction of ride hailing, the growth of home deliveries, and the widespread use of satellite navigation (which often routes drivers through less-congested local streets). This has reduced many people's quality of life by increasing air pollution near their homes and making residential streets less safe and welcoming.

We need to do more to reduce car use in London. Private cars can be a hugely inefficient way to travel, with dramatic costs for others and for the planet. Policymakers at the highest level recognise this: a report commissioned by City Hall found that car traffic must reduce by 27 per cent by the end of this decade in order to meet London's net zero target.[4] The motor car's domination of our streets also has a disproportionate impact on poorer Londoners, who are much more likely to be exposed to air pollution and suffer its effects.

Cities are also our best chance to make the private car redundant for most journeys. This is reflected in the Mayor's Transport Strategy which aims for aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041. London is dense enough to allow most journeys to be made by public transport, walking, or micromobility (smaller vehicles such as bikes and scooters). Data on how Londoners travel shows that two-thirds of car journeys could be made by bike, e-bike and e-scooter in under 20 minutes[5,6] – but many people do not see riding a bike or a scooter in London as an option for them. This is partly because they feel vulnerable when sharing the road with cars, vans and lorries – and this is unlikely to change as long as street space is predominantly allocated to car use rather than to walking, cycling and scooters.

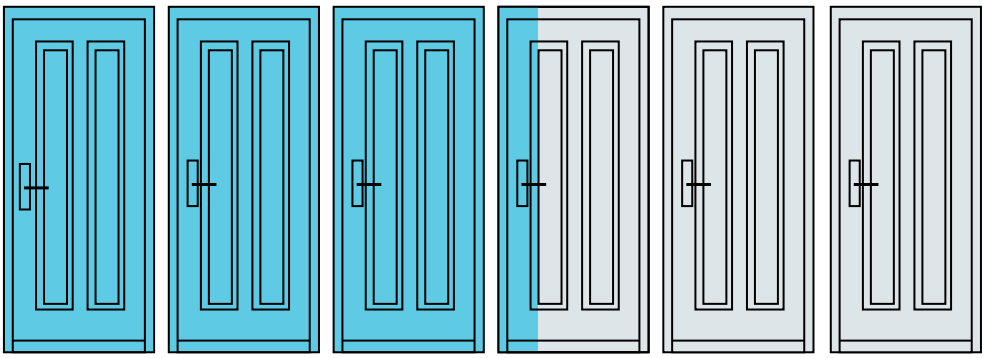
Congested roads penalise all road users, including buses and "working traffic" – the people making deliveries, carrying out services, and driving taxis or emergency vehicles. The rise in home deliveries and servicing vehicles adds another dimension to the problem: the city relies on them to function, but there are large efficiency savings to be made by introducing more parcel pick-up/drop-off points and consolidation hubs in neighbourhoods. Our 2021 report on greening London's freight and deliveries dives into this issue.[7]

The present report looks at how local authorities can reduce the use of the private car on local streets and provide alternative travel options. Further, it examines how this could be done in a way that addresses the concerns of all road users. In this report we understand sustainable travel as modes that do not include the private motor diesel or petrol car.

Research methods

Our mixed-methods approach included a review of studies looking at the impact of LTNs, technical guides on how to deliver LTNs, and surveys on Londoners' views of them. To discover which approaches to LTNs had worked and which had not, we organised a "lessons learned" roundtable with senior professionals involved in the implementation of LTNs. This was attended by staff from local authorities involved in LTNs and related schemes, as well as people who have worked in community outreach on LTNs. We also conducted interviews with people who have expertise in designing LTN schemes, as well as those who have been involved in campaign groups for or against LTNs.

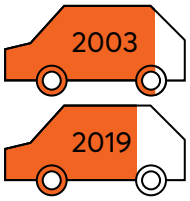
Data digest: car ownership and use in London

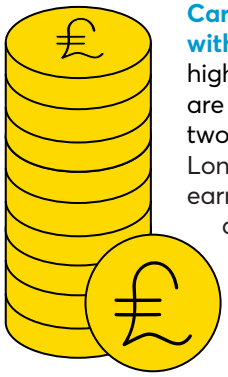


54%

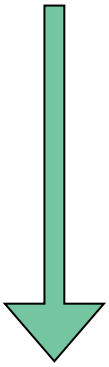
of London households own a car. **40%** of households in inner London and **68%** in outer London.[8]

Car ownership in London declined from **0.83** cars per household in 2003 to **0.74** in 2019.[9]



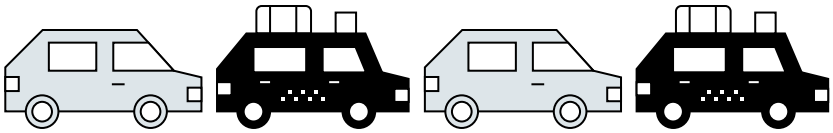


Car ownership rises steadily with household income, and higher-income households are much more likely to own two or more cars. In inner London, **60%** of households earning between **£20,000** and **£35,000** a year have no car, but this is true of only **38%** of households earning between **£75,000** and **£100,000**.[10]



At an individual level, Londoners are using their cars less: the number of trips driven per person per day has **fallen by 23%** between 2013 and 2019.[11]

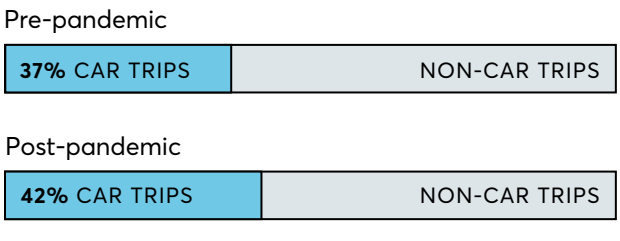
23%

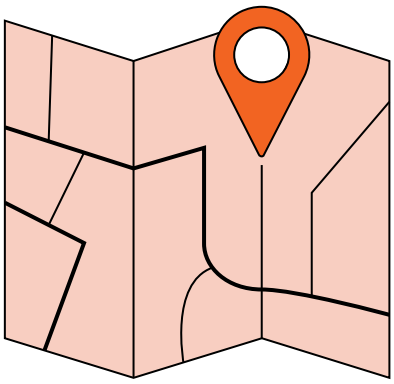


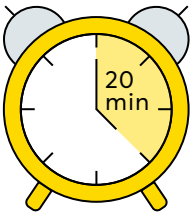
But that doesn't mean there are fewer vehicles on the road: total vehicle kilometres driven by cars and taxis have **only decreased by five per cent since 2009**, and this has been almost entirely counterbalanced by an increase in van kilometres over the same period. **The ride-hailing boom and population increase probably help explain this discrepancy.**[12]

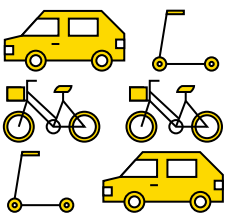
Some estimates point to there being even more vehicles on roads, particularly on so-called minor roads. According to estimates by the Department for Transport, **vehicle traffic in London increased by 21%** between 2009 and 2019, but on **minor roads*** vehicle traffic **increased by 57%**.[13] These estimates include vans and lorries, but **most traffic consists of cars and taxis**.**

Following the pandemic, car trips have increased as a proportion of total trips made in London.[14]



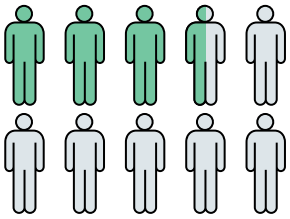






Two thirds of car trips in London could be made by bike, e-bike, and likely by e-scooter in 20 minutes or less.[15]

35% of Londoners use a bike to travel around London.[16]



*minor roads are roads which are not A roads or motorways.

**The Department for Transport is reviewing the methodology for producing these statistics, including which traffic counters are considered and what constitutes a "minor road".

1. What are LTNs?

The term "low-traffic neighbourhood" was coined to describe the wave of government-funded schemes introduced since the spring 2020 COVID-19 lockdown. However, there have been similar London interventions before with different names – for example, the Mini Hollands scheme introduced by the Mayor in 2014.

In this chapter we look at what makes a low-traffic neighbourhood, and outline a brief history of their introduction in London.

Defining low-traffic neighbourhoods

Low-traffic neighbourhoods refer to traffic filters (such as bollards, planters or cameras) that stop vehicles from using certain streets as a through road, yet allow all homes to retain vehicle access.

Nonetheless, there is no consensus on a definition of low-traffic neighbourhoods, since individual schemes can be very different from one to another. Schemes vary in size from a couple of streets to a whole neighbourhood. They also differ in the exemptions they offer to certain vehicles. Some schemes' filters stop all motor vehicles from continuing down or turning into a street, whereas others let some vehicles through – such as delivery vehicles, taxis, blue badge holders and emergency vehicles. Some low-traffic neighbourhoods also let residents drive through. Planters, trees and bollards are generally used as barriers when there are no such exemptions; cameras and raising bollards are used as filters when there is a need to let some vehicles through.

Crucially, several transport planners we spoke to believed that for a scheme to properly be called a low-traffic neighbourhood, it must feature public space enhancements such as wider pavements, green parklets, and protected cycle lanes. Although the 2020 wave of low-traffic neighbourhoods lacked these, they were features of previous schemes such as the Mini Hollands.

Boroughs have also been introducing traffic barriers near schools – so called "school streets", similar to LTNs but on a micro-scale, and with restrictions often limited to school times. Local authority planners have told us that school streets have faced much less opposition than LTNs – probably because their benefits in terms of safety for children and reduced exposure to air pollution are so easy to grasp and hard to disagree with.

Low-traffic neighbourhoods can also have add-ons that complement changes to the street layout. These could be confidence-building courses for cycling, controlled parking zones, credits for discounted bike or scooter hire and car clubs, or cheaper public transport fares. Chapter 5 looks at how these complementary offers help low-traffic neighbourhoods achieve their aims.

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A brief history of LTNs

Although the term "low-traffic neighbourhood" is used to describe the government-funded schemes introduced since the spring 2020 lockdown, similar schemes have been around for a long time in London. Recent research by campaign group #BikeIsBest counted around 3,700 traffic filters in London, all introduced before 2020;[17] some traffic filters were introduced as early as 1974 around De Beauvoir Town to create safer play spaces for children.[18] Besides, many of London's neighbourhoods were created to prevent people from driving through them – these are the cul-de-sacs so familiar in London.

The most comprehensive low-traffic neighbourhoods created before the pandemic were the "Mini Holland" schemes funded by the Mayor of London in 2014 and introduced in the London boroughs of Waltham Forest, Enfield, and Kingston upon Thames. As well as traffic filters, Mini Hollands had many complementary features to encourage people to shift from driving to walking and cycling for their journeys within the borough. These included protected cycle routes on main roads, wider pavements, Copenhagen crossings (that give priority to pedestrians and reduce vehicle speeds), new planting and greenery, cycling proficiency courses, and pedestrian-only high streets. Mini Hollands met with high levels of resistance on their introduction[19,20] – but according to transport planners in Waltham Forest and Enfield, opposition has now waned and there is broad support for the schemes.

The term "low-traffic neighbourhood" really rose to prominence following the introduction of temporary modal filters across London and the UK in spring and summer 2020. 20 of London's 33 boroughs introduced these in 2020, although some boroughs have removed their LTNs either partially or completely since then.

The 2020 schemes were rather minimalist, since they only included traffic filters (generally wooden plant boxes) and signage as part of the trial phase. Nationally, there were limited bike repair vouchers available, as well as funds to introduce protected cycle lanes – but these initiatives were not linked to a borough having introduced a low-traffic neighbourhood.

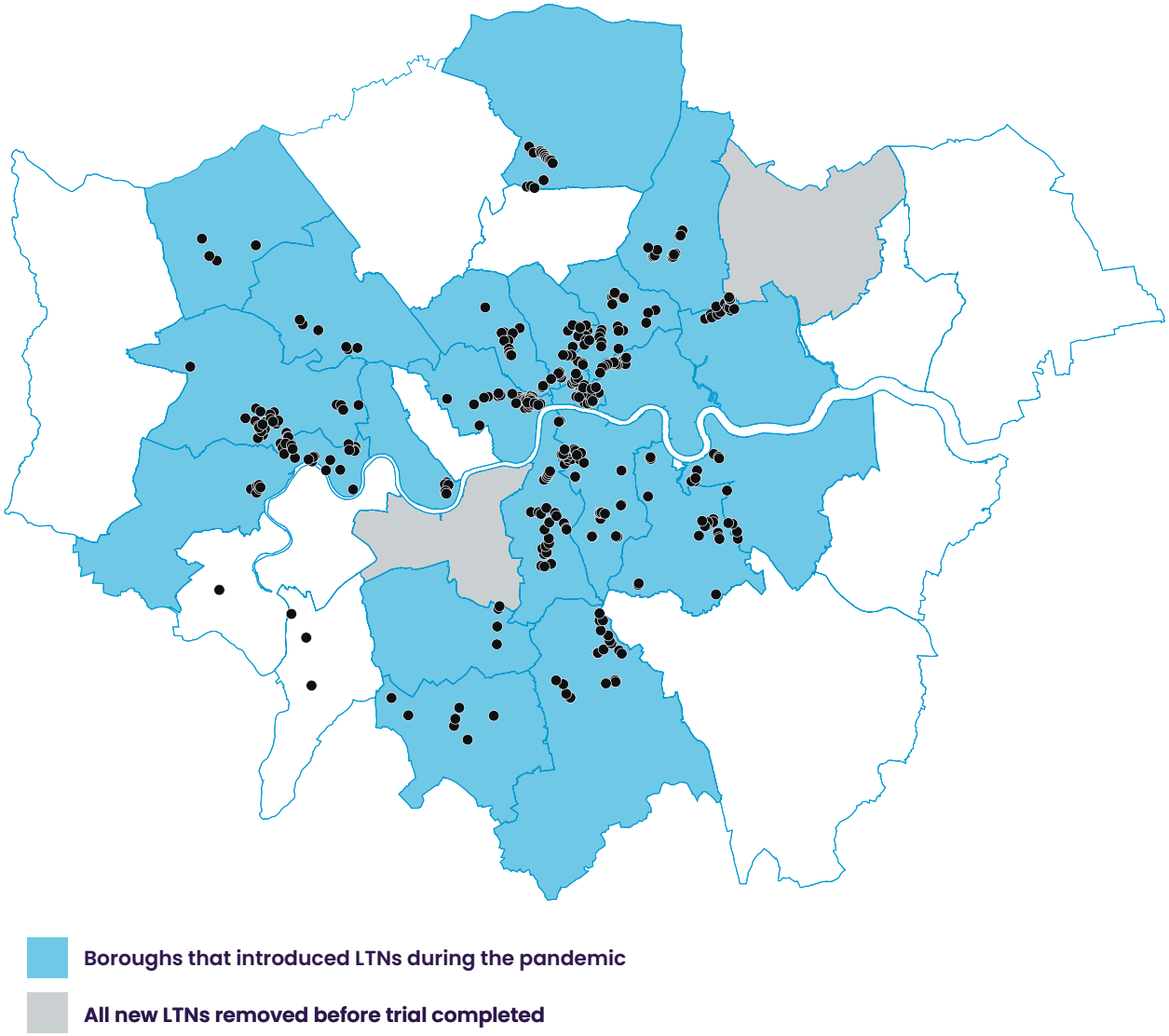
Although many low-traffic neighbourhood schemes were introduced in London – researchers counted 72 at one point – they were far from everywhere in the city. Research estimated that only 3.7 per cent of Londoners lived inside one of these low-traffic neighbourhoods, while 8.8 per cent lived within 500m walking distance of a new modal filter.[21]

The map on the next page shows the locations of London's 2020 low-traffic neighbourhoods. At the time of writing, Transport for London believes that 101 low-traffic neighbourhoods were introduced in 2020 and 2021, and that 30 low-traffic neighbourhoods have been suspended or removed.[22]

Enabling social distancing

While low-traffic neighbourhoods aim to create a better city in the long term, the context of the pandemic explains why so many were introduced in 2020, and why they were rushed in. As the economy reopened from lockdown, policymakers wanted to avoid crowding on public transport to reduce virus transmission, without making people rush and rely on their cars. Having more people walking and cycling was one way to provide an alternative to public transport and the private car – but for this shift to happen quickly, there needed to be rapid improvements in the safety and convenience of walking and cycling

Figure 1: Map of modal filters introduced in between March and September 2020



Source: Aldred, R. (2020). Mapping London's new LTNs.[23]

2. What do Londoners think of LTNs?

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It's an understatement to say that low-traffic neighbourhoods have been controversial: there have been town hall protests in London and elsewhere, as well as vandalism of traffic filters and signs. Nonetheless, groups of residents have also been lobbying for them – and often in the same places. Some commentators have even compared low-traffic neighbourhoods to Brexit in their ability to divide public opinion – and think that the place of cars in the city will be London's culture war.

So why have LTNs generated such sustained opposition? And what do Londoners as a whole think of low-traffic neighbourhoods?

The opposition to LTNs

Low-traffic neighbourhoods have faced vocal and sustained public opposition, leading to many schemes being either revisited or dropped altogether. While previous schemes such as Mini Hollands faced intense community scrutiny and some level of opposition, the 2020 LTNs faced opposition on a larger, London-wide scale. This came from a range of sources, featuring protests and, more seriously, vandalism.

This section looks at the arguments that were made in opposition to low-traffic neighbourhoods installed during the pandemic across London, and some of the reasons why these arguments caught people's attention. As in any contemporary public debate, some of the arguments put forward could amount to disinformation or misinformation, often fuelled by sharing on social media platforms. Nevertheless, it's important that these arguments are recalled and understood.

There have been many different voices raised against LTNs, and any summary of the arguments will inevitably be reductive. However, opposition to LTNs broadly raised three main objections:

- Lack of alternative options for travel.
- Lack of consultation and unhappiness with the decision-making process.
- A view that LTNs are by definition ineffective and unfair.

"Residents in [our borough] feel like they are making essential journeys by car, so why should they be penalised by LTNs?"
Community member

"Unless you are able and can ride a bike, the LTN isn't going to fit into your life […] The design of LTNs doesn't account for people with disabilities or large families. It's become an Us and Them discussion."
Community member

"People want to make changes: use smaller cars and electric cars but these changes are expensive and LTNs don't help [with those costs]"
Active travel campaigner

Lack of alternative options

As with most changes, much of the dissatisfaction with low-traffic neighbourhoods has come from groups who felt they were losing out from their introduction. Some groups were inconvenienced by changes to journeys. For drivers who spend a lot of time in traffic, the idea of potentially facing more traffic on main roads and not being able to drive on less busy roads would have been particularly inconvenient – especially for those who don't live inside an LTN and therefore don't benefit from having fewer vehicles on their street.

At the same time, many felt they weren't presented with a credible alternative to driving – they didn't see public transport, active travel or other sustainable travel options as a solution for them. There could be several reasons for this: as well as specific mobility needs, these might include the need to travel over longer distances, travel with children, carry heavy loads or take several trips in a row – all of which may be inconvenient on public transport.

Many also thought that riding a bike or a scooter in the city is unsafe. One community member mentioned that people who don't cycle in London felt excluded by the suggestion to switch from driving to active travel.

Lack of consultation

LTNs seem to have caused controversy for three connected reasons:

- **Speed of decision making and implementation.** The government required local authorities to act quickly to make decisions on LTNs, and the nature of the projects meant that they were also implemented more quickly than other infrastructure projects.

- **Nature of engagement.** Because engagement around LTNs largely happened during lockdown, the usual methods that local authorities use were not available, and the use of online methods was patchy.

- **Cross-London issue.** Multiple local authorities were implementing similar schemes at the same time, allowing for a coalition of opposition to emerge. This was linked to a longstanding perception of unfair treatment of drivers (framed as "ordinary people" or "working people") by elite decision makers.

"The government was clear with the COVID LTNs – it was to introduce them and then consult from a 'live scenario', rather than consult and engage pre-introduction."
Local authority officer

"People feel passionate about the fact they haven't been engaged. It feels like they were imposed on them and then fined during a period when they were already hurting economically."
Community member

"People feel like we are using the public health emergency to get these restrictions in by the back door"
Local authority officer

The 2020 low-traffic neighbourhood schemes were also highly unusual in that they were conceived as pilots to be implemented quickly and without engagement at first, with consultation coming after.

However, this trial-and-error approach angered some residents and road users. Some disliked being taken by surprise, and thought they should have been engaged on what they saw as a major change to the public realm in their area. As well as the lack of engagement, some felt the introduction of fines for a scheme that was meant to be temporary was harsh – especially as the pandemic was already disrupting people's lives. Some also perceived LTNs as yet another restriction being imposed at a time when their lives were upended by the pandemic – or as simply a council fine trap.

Others noted that LTN schemes were poorly thought through as a result of not involving their users. In some cases, traffic filters created barriers making a road crossing inaccessible to people with specific mobility needs – a situation which an earlier consultation process could have avoided. There were reports of emergency vehicles, delivery vehicles, taxis and private hire vehicle drivers being unaware of the restrictions because these weren't reflected on their satnavs. The widely used planter with new signage became totemic for the opposition to LTNs, not least because many didn't spot or understand the new restrictions at first sight. Some who rely on taxis, mini-cabs or ride-hailing services reported seeing an increased cost to their journeys as a result, and there were photos of vehicles reversing and creating dangerous situations for pedestrians. The surprise effect fed arguments about LTNs creating longer response times for emergency vehicles. There were also concerns that the reduction in vehicle traffic would make some people feel less safe when walking alone at night, and that those who valued street busyness hadn't been taken in consideration.

The lack of an early consultation also removed an opportunity to explain the purpose of the scheme and to help people think about how they and others use their local streets. As a result, several local authorities were on the back foot in terms of responding to concerns about the schemes and monitoring their impact. This may have contributed to polarising the debate by pitting groups of users against each other.

Later in this report, we explore what good practice engagement and communications look like – and what support local authorities and Transport for London require to be able to engage with residents.

"People who are involved and have a negative experience are more concerned with the inequity of LTNs. There is a perception that LTNs have been designed to benefit some people but not others."
Civil servant

Perception that LTNs are ineffective and unfair

Another kind of opposition to low-traffic neighbourhoods sees them as ineffective or unfair. As shown in Chapter 3, many people didn't believe LTNs were an effective solution to reduce the city's reliance on the private car, instead seeing them as a zero-sum game that simply displaces traffic from one place to another.

Some campaigners also felt that LTNs were inequitable – believing that they push traffic onto main roads that are already congested, and therefore negatively impact quality of life for the people who already suffer the most from noise and pollution. This criticism also sees LTNs as traffic-free havens that favour leafy and well-to-do residential areas, while poorer Londoners living on busier roads are either seeing a negative impact or no improvement at all. Linked to the claim that LTNs favour wealthier residents, some campaigners also argued that people who walk and cycle frequently are more likely to be White and middle-class – that favouring their journeys over those of people who drive is unfair and risks accelerating the gentrification of diverse neighbourhoods.

The next chapters look at how far these concerns are borne out by evidence, and how they can be addressed.

General views

Views on the introduction of LTNs

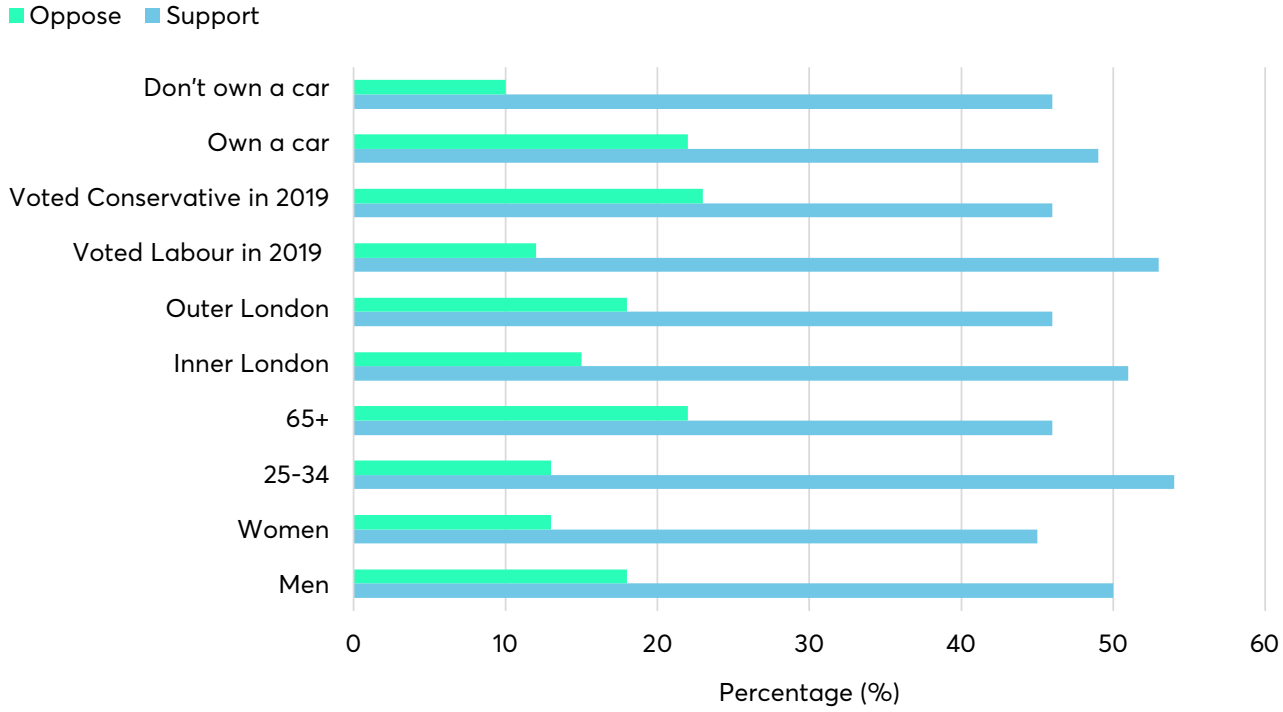
While there are strong and opposing views on the introduction of low-traffic neighbourhoods, public opinion in London is not split down the middle on the subject. According to polling of eligible London voters conducted in March 2021, 47 per cent of Londoners supported the introduction of low-traffic neighbourhoods in London, while 16 per cent opposed their introduction and 28 per cent "neither supported nor opposed" it.[24] Earlier polls in October 2020 and January 2021 asked a similar question (though the October question was slightly different) and yielded similar results. Another poll by Transport for London in summer 2021 found the same level of support but a slightly higher level of opposition, at 23 per cent. So while low-traffic neighbourhoods don't have clear majority support among all adults, the polling shows that many more people support low-traffic neighbourhoods than oppose them.

There were also differences in support registered across different demographic groups – though perhaps not as wide as might be expected from the "culture war" framing around low-traffic neighbourhoods:

- Men were slightly more likely than women to support their introduction (50 per cent compared to 45 per cent).
- Residents of inner London were slightly more likely than residents of outer London to support (51 per cent compared to 46 per cent).
- People who didn't pursue higher education were less likely to support low-traffic neighbourhoods, but also slightly less likely to oppose them.
- There were some differences in support across age groups, but not a big age divide. People within age brackets 35-44 and 55-64 were more likely to support LTNs – perhaps because they were more likely to care for younger children or be grandparents to them – while people aged over 65 were less likely to support them.
- People who voted Labour at the 2019 General Election were more likely to be in favour (52 per cent) of LTNs than Conservative and Liberal Democrat voters (46 per cent), and also less likely to oppose them (12 per cent compared to 23 per cent).

- People who own a car were slightly more likely to be in favour of LTNs than people who did not own one (49 per cent compared to 46 per cent) – although people who own a car were also more likely to oppose LTNs (21 per cent compared to 10 per cent). This is not as surprising as it may seem, since road users are not all car owners: delivery drivers, taxi drivers, people carrying out services, and emergency service workers often do not own cars. Conversely, some car owners only drive in London very infrequently.

Figure 2: To what extent, if at all, do you support or oppose the introduction of Low Traffic Neighbourhoods in London? (March 2021)



Source: Redfield & Wilton Strategies (2021, March 15)[25]

Views on LTNs after their introduction

People who live in low-traffic neighbourhoods were more likely to support the introduction of LTNs than people who didn't live in one (57 per cent compared to 47 per cent) – likely because people living in an LTN are experiencing its benefits first-hand. However, people living outside LTNs were as likely to oppose them as people living inside them (20 per cent in both cases). The fact that there isn't a neat split between residents and those who want to drive through also shows that some people – whether they are living in an LTN or not – still want easy access to residential streets for large motor vehicles to carry out work.

This data is London-wide, and undoubtedly there will be local differences. For example, a resident survey conducted by Transport for London around the Railton LTN area found a roughly equal split between people who think LTNs are suitable for the area and people who think they are not – though there was majority support within the LTN and a clear majority of opposition outside it. It's also likely that not everyone who lives inside or just outside an LTN will be aware of it, since their boundaries are not obvious to most people.

Local authority officers taking part in our roundtable also told us that in their experience, local acceptance of low-traffic neighbourhoods increases with time – they noted that there are practically no requests for any of the pre-2020 LTNs to be removed.

Views on the aims of LTNs

Support for tackling climate change and air pollution was greater than support for LTNs. A large majority of Londoners are frequently concerned by climate change and air pollution,[26] and want to see these problems tackled. For example, in a 2020 poll, 78 per cent of Londoners said tackling air quality was a priority issue.[27]

That there is more support for action against environmental problems than there is for a specific policy is to be expected – especially a policy that calls for behaviour change. But it does show that some people want to see air pollution and climate change tackled, yet do not support low-traffic neighbourhoods. This may be because they do not think low-traffic neighbourhoods are the right solution, or because they think the inconvenience does not justify the benefits. Chapter 4 looks at how communications around LTNs can be laser-like in their focus on local issues and public health emergencies.

Views on the impact of LTNs

Although many more Londoners support LTNs than oppose them, only 32 per cent thought they reduced traffic overall, while 42 per cent thought they redirected cars to other areas and 25 per cent didn't know.[28] This is a key public perception challenge for LTNs: a majority of people either think they just shift the car problem somewhere else or don't know if they do. Some of the people who support LTNs may do so for other reasons – for example, to make particular streets quieter, safer and less polluted – but most people still need convincing when it comes to their impact on overall traffic reduction.

3. The impacts of LTNs

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There has been much debate on whether LTNs are effective and whether their benefits outweigh the costs. Many people challenge the ability of LTNs to reduce overall traffic and also believe they have disadvantages. This chapter looks at the stated objectives of low-traffic neighbourhoods, and the available evidence on their impact – both positive and negative.

Impact on walking and cycling

In London, many people want to walk or cycle more but feel it is too dangerous for them or their household.[29] Evidence shows that people generally prefer to be on quieter roads when they are on foot or riding a bike[30] although many choose busier routes when walking at night. Similarly, many people find crossing roads that are heavy with traffic or fast-moving vehicles particularly intimidating. Since so many London streets are dominated by cars, vans and trucks, many feel they have no choice but to drive – which makes the problem worse.

The health benefits of walking and cycling are well-known, and include better mental health, reduced sickness levels and less overall pressure on the NHS. By making it easier and safer to be active – and by creating places where people can meet, play or exercise – low-traffic neighbourhoods can help tackle London's obesity epidemic and improve mental health.

Encouraging more people to walk and cycle was a chief aim of the government's introduction of low-traffic neighbourhoods in 2020:

> "Far more people will be cycling and walking thanks to plans to boost greener, active transport […] Fast-tracked statutory guidance, published today and effective immediately, will tell councils to reallocate roadspace for significantly increased numbers of cyclists and pedestrians. In towns and cities, some streets could become bike and bus-only while others remain available for motorists. More side streets could be closed to through traffic, to create low-traffic neighbourhoods and reduce rat-running while maintaining access for vehicles."
>
> **Department for Transport, 9 May 2020**[31]

Table 4 in the appendix summarises changes to cycling and walking measured both inside and outside some of the low-traffic neighbourhoods introduced in London. Changes in cycling are also presented in Figure 3.

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Boroughs that tracked changes in cycling over time found large increases both inside and outside LTNs, with greater increases in cycling inside LTNs. For the 2020 LTNs, the pandemic will have played a role as more people decided to walk or cycle to avoid public transport: between spring 2019 and 2021, cycling increased on average by 7 per cent in inner London and 22 per cent in outer London.[32] It's also worth noting that cycling levels vary depending on time of year and weather: nevertheless, it is clear that many people have been taking advantage of the quieter LTN streets to cycle.

There is also evidence that the Mini Holland schemes have generated an increase in walking and cycling among residents, as well as a drop in car ownership. Within three years, people living in Mini Holland scheme areas walked or cycled for 41 minutes more during the previous week (on average) than people living in similar areas in boroughs that did not have the scheme.[33] Mini Holland residents were also more likely to have cycled in the previous week, and more likely to meet the recommended active travel and physical activity targets. People living near Mini Holland schemes (in the same borough, but not within the boundaries of the scheme) also walked or cycled more than people who lived in other boroughs, but the impact of the Mini Holland measures was lower. The survey tracks the same residents over three years to ensure that increases in walking and cycling are not due to new residents being drawn to the area by the increased walking and cycling opportunities there. Overall, the Mini Holland schemes introduced in Kingston, Enfield and Waltham Forest have been estimated to bring £724m in health benefits from increased walking and cycling (a ninefold return on public investment).

Impact on motor traffic and car ownership

One key aim of low-traffic neighbourhoods is to reduce the number of private cars overall in order to make streets safer, alleviate air pollution and reduce congestion.

Figure 3 summarises the available data on car traffic, measured before and after the introduction of low-traffic neighbourhoods. It is not exhaustive: some local authorities did not collect this data.

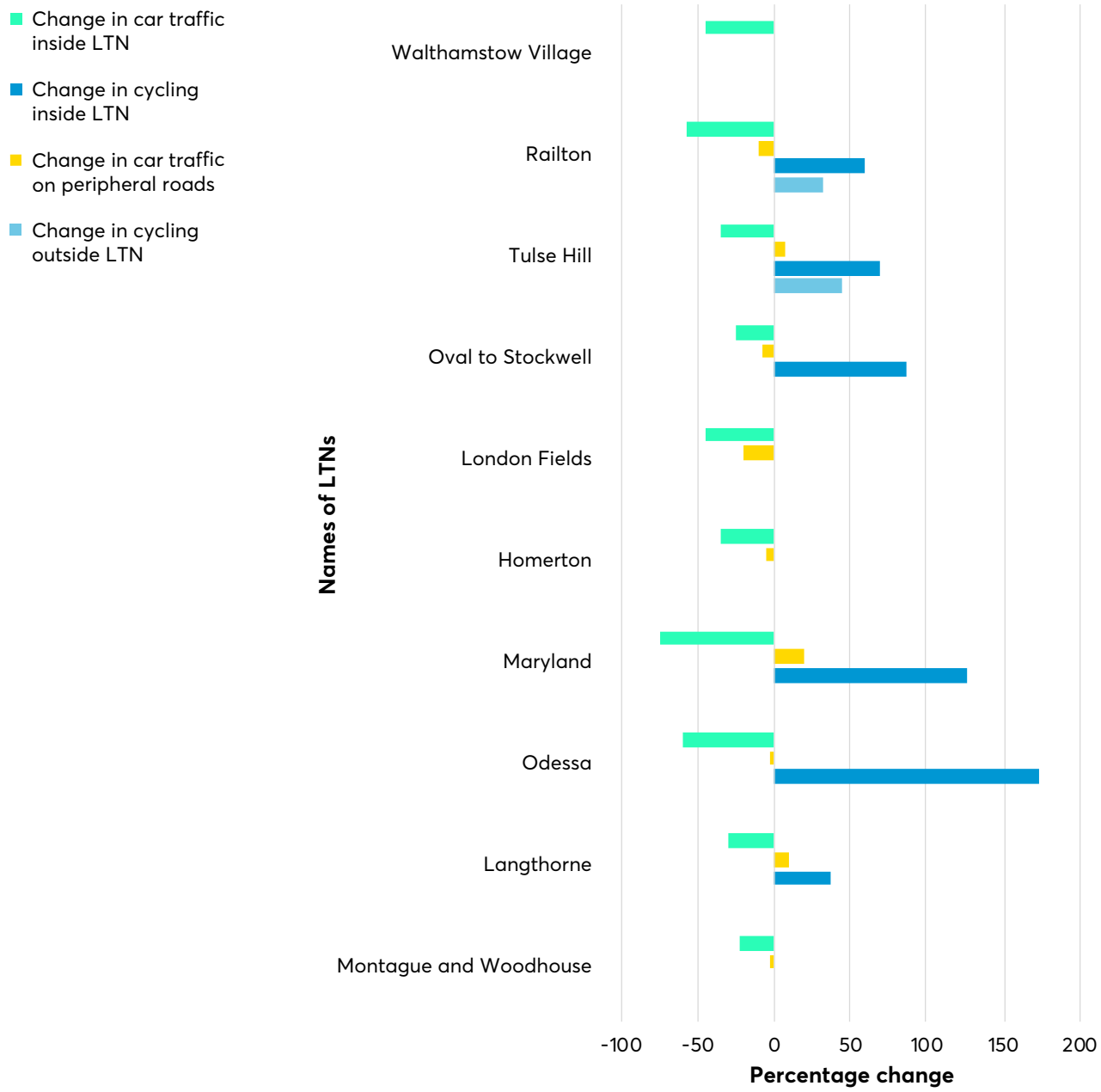
Overall the evidence shows big reductions in car traffic inside LTNs, but the picture is more mixed for boundary roads – some seeing increases in traffic and others seeing decreases. This data is based on traffic counts and not licence plate tracking, so it is not possible to prove there is a causal link but it would seem likely there is a link. The data points to overall reductions in traffic, as increases in traffic on boundary roads tend to be smaller than decreases within the LTN. But how much traffic is displaced onto nearby roads can vary hugely – not only from scheme to scheme but from street to street. In some cases boundary roads have seen big increases in traffic.

Where there is traffic displacement, the Mini Hollands experience suggests that it tends to reduce over time. This is because some people start to change how they make journeys or where they make them to – but it takes some time for this to happen. Most of the impact studies for the 2020 and 2021 LTNs were conducted when the schemes were new, and in some cases enforcement hadn't yet started.

There are several reasons why some LTNs lead to more traffic displacement than others. This may be due to decisions on which streets are closed to through traffic and which are not – or it may be that there aren't enough incentives or support for people who can't change how they get around. Chapter 5 in this report looks at how measures complementary to LTNs can help reduce overall traffic and avoid displacement.

There is also evidence that LTNs can reduce car use and ownership. Two studies look back at the impact of the Mini Holland schemes over several years using different methods, and both found that people living inside LTNs became less likely to own a car and use a car – and that effect this was not due to new people moving in to the LTN area, but rather existing residents changing how they get around. These studies are presented in table 6 in the appendix.

Figure 3: Average change in cycling and car traffic before and after the introduction of an LTN



See full data in Appendix. This data was compiled in January 2022 and has not been updated since. These are average changes and vary from street to street. No cycling and peripheral roads data was available for Walthamstow village. No cycling data was available for London Fields and Homerton. No cycling data for peripheral roads was available in Newham.

Impact on air pollution

Local authorities are responsible by law for improving the health of their local population, and many have introduced low-traffic neighbourhoods to reduce air pollution. Many local authorities believe that low-traffic neighbourhoods can help reduce air pollution both inside and outside LTNs by reducing the overall number of car trips. Low-traffic neighbourhoods are not the only way to reduce air pollution, but they are measures that are within a borough's power – and their focus on residential areas seeks to reduce exposure directly where people live.

It has been argued that uptake of electric vehicles will slash air pollution in London. This is generally true, although electric vehicles still emit particulate matter through brake and tyre friction. However, despite the recent increase in electric car sales, 99 per cent of UK cars are

still petrol or diesel, and the UK government will only ban the sale of all petrol and diesel vehicles in 2030.[34]

While one would expect air quality improvements to follow reductions in motor traffic, evidence on the impact of LTNs on air pollution is lacking. This is partly because many local authorities didn't have air pollution trackers on LTN streets before and after their introduction, and because results need to be "de-weathered" – removing skews caused by the weather, which can trap or disperse locally emitted pollutants.

One study that is available looks at air quality inside two of Lambeth's LTNs and on boundary roads. It shows that the impact of the LTN on air quality was negligible overall – with some roads seeing an increase and others seeing a decrease. Additionally, some of the roads that saw a decrease were residential streets, while others were major roads.[35] More research and evidence is clearly needed on the question.

Impact on road injuries

In 2020 there were 96 people killed by a traffic collision on London's roads, while 2,974 people were seriously injured and 21,275 slightly injured (for example suffering from a sprained ankle, cut or neck whiplash). Most fatalities were people who were walking, cycling or riding a motorcycle and who died after a collision with a car, van or truck.[36] There are two ways to make roads safe: either by having fewer vehicles on them, or by reducing their speed. Low-traffic neighbourhoods can help achieve both of these. 2020 hit a record low in terms of the number of road injuries, as there were fewer cars on the road during lockdowns.

There is strong evidence that the introduction of a low-traffic neighbourhood can lead to very large reductions in road injuries. Research conducted on the Waltham Forest Mini Holland scheme found that road injuries inside the low-traffic neighbourhood were three times lower after the introduction of the scheme compared to other areas in the borough and in outer London. At the same time there was no evidence of an increase in road traffic injuries on the LTN boundary. The authors note that there were fewer pedestrians, cyclists and motorists injured, showing that LTNs make all road users safer.[37] Research on the impact of the 2020 LTNs found that the total number of road injuries inside LTNs halved compared to the rest of London, and that there was no increase in accidents on boundary roads.[38]

Concerns about LTNs

One of the main arguments against LTNs is that they are said to create unintended problems – mostly due to traffic displacement. This section looks at these concerns in more detail, and whether the available evidence supports them.

Impact on emergency vehicle response times

Changes to street layouts always run the risk of slowing down emergency vehicles if drivers are not aware of the changes or need to make detours. Congestion is also a source of delays – which could be made better or worse by an LTN, depending on traffic displacement.

The London Fire Brigade reports that 'traffic calming measures' have been identified as the main reason for vehicle delay 3,035 times in 2021, up from 2,145 times in 2020.

However, according to research on the response times conducted between October 2020 and February 2021 (after the introduction of the 2020 LTNs), LTNs didn't lead to longer response times – and this was true whether they used physical traffic filters or cameras.[39] There is also evidence from the introduction of Mini Holland in Waltham Forest, which shows the scheme did not affect London Fire Brigade response times, and that there was a "slight" improvement in response times on boundary

roads.[40] The authors do note that "traffic calming measures" have been more likely to be identified as a cause of delay by emergency services, but that this was linked to their novelty rather than an actual increase in response times.[41] That said, the scale and pace of implementation of the 2020 LTNs will inevitably have some impacts in terms of network knowledge. Transport for London and the boroughs have found ways to mitigate this issue, and these are explored later in the report.

Impact on street crime

There has been concern that having less motor traffic in an area would lead to an increase in street crime, as there would be fewer potential witnesses to act as a deterrent. Research on the Waltham Forest Mini Holland scheme found evidence of the opposite: compared to other areas, total street crime decreased by around 10 per cent after the introduction of the LTN, and by 18 per cent three years after – with no evidence that crime has been displaced to neighbouring areas. In regard to the different types of crime, there was a greater reduction in violence and sexual offences, and the only type of crime that saw an increase was bike theft – which the authors link to increased cycling in the area.[42] Despite this evidence, some people may still feel unsafe after dark in public spaces where there is less motor traffic, and a subsequent section looks at how this can be mitigated.

Impact on equity

Another key argument against low-traffic neighbourhoods was that they push more traffic onto main roads, which tend to have poorer residents living on them (generally because they are less expensive to live in due to both the level of noise and the types of housing available). This would make some poorer Londoners worse off in cases where there is traffic displacement, and LTNs would not do anything to improve the living environment on main roads. Related to this, some argued that LTNs were mostly introduced in wealthier areas.

Concerns that the 2020 low-traffic neighbourhoods were primarily introduced in wealthier areas are unsubstantiated overall. Research finds that LTN residents have a similar demographic profile to residents living in areas that include LTN boundary roads, in terms of deprivation, age and ethnicity.[43] Across the city, LTNs were more likely to include more deprived areas than wealthier areas – this is because more LTNs were introduced in boroughs with higher levels of deprivation. That said, there was a great deal of variation from one LTN to another: in some boroughs LTN areas were less deprived, and their residents more likely to be white, than in the rest of the borough. As they implement LTNs, local authorities should ensure that low-traffic neighbourhoods benefit the people who are most exposed to air pollution. Our final chapter looks at how local authorities can deliver LTNs in a way that ensures they are fair.

As previously mentioned, the evidence on traffic displacement is mixed. But increases in traffic on main roads can be tackled by measures which are complementary to LTNs – from local ones such as the availability of bike or scooter hire and mobility credits (discounts on public transport or car clubs if people choose to get rid of their car), to London-wide road user charges (which encourage drivers to upgrade to cleaner vehicles or drive at quieter times). Chapter 5 looks at these complementary options, and how they can make LTNs more effective.

Other impacts

Other impacts of low-traffic neighbourhoods are hard to measure – particularly impacts on personal wellbeing and the planet. However, we know from wider research that they can be very important. This section gives a quick overview of these additional impacts.

"You get community cohesion and informal chats in the street, [and a] healthier local economy"
Local authority officer

"In an area where 30 per cent of households don't have a car, if we're talking about equity – this [street] is a public good that we are divvying up and deciding that those 30 per cent have to deal with the car presence"
Local authority officer

Impact on noise

Streets without through traffic are quieter as fewer vehicles use them – and those that do tend to be driven at slower speeds. This creates a better environment for residents, as less noise pollution is linked to improved mental health, better sleep and benefits to overall wellbeing. One local authority officer speaking at our roundtable mentioned that reducing noise was one of the main reasons why residents asked their council for a low-traffic neighbourhood.

Impact on neighbourliness and sociability

Low-traffic neighbourhoods also aim to improve the quality of life on residential streets. Currently most street space is occupied by cars (both parked and driven), yet 46 per cent of London households (and 60 per cent of households in inner London) do not own one.[44] Many will still use road space indirectly – for example to receive deliveries or when ride hailing – but many Londoners do not have any outdoor space, and overcrowding is higher than anywhere else in the country.[45] Councils therefore hope that by reducing traffic flow and creating a greener environment, they will enable more people to spend time on their street – stopping for a chat or sitting on a bench – and create more spaces for children to play.

Impact on carbon emissions

The climate emergency is another reason to encourage travel by walking, cycling and other sustainable modes rather than private cars. 28 London boroughs and the Mayor of London have declared a climate emergency, and those local authorities that have implemented low-traffic neighbourhoods see them as a quick and effective tool to reduce carbon emissions from petrol and diesel vehicles.

Electric cars will in time contribute to reducing carbon emissions, but 99 per cent of UK cars are still petrol and diesel. It will take time before most people upgrade to an electric vehicle, which will not happen soon enough to meet London's current target of net zero by 2030. Climate experts are also deeply concerned about carbon emissions from electric car-making, as well as the investments needed to supply electricity in quantities that can enable the number of journeys made by car at present. Therefore, there is a consensus that there will need to be fewer journeys made by car in the future.

4. What does a successful LTN look like?

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The 2020 LTNs were not at all perfect. They were introduced as pilots – and local authorities have learned a huge amount from their rollout. But they have also been a bruising experience for local authorities, and high levels of public resistance remain a barrier to their introduction. How can the concerns around the introduction of low-traffic neighbourhoods be addressed?

As part of the research for this report, we have had the opportunity to learn lessons from the introduction of LTNs across the city – thanks to interviews and a roundtable with people involved in their rollout. In this chapter we outline the factors that make a low-traffic neighbourhood successful: good scheme design, significant engagement, and communications.

Design of low-traffic neighbourhoods

There are many detailed decisions that local authorities must take when introducing a low-traffic neighbourhood. Some are linked to the kinds of restrictions on through traffic that they will introduce, while others affect how the public realm is reappropriated for other users and whether any negative impacts are mitigated.

> "The debate has to be more than about moving traffic from one place to another. The bigger the LTN, the larger the chance you can create cycling potential. You have to connect LTNs together with other infrastructure"
> **Local authority officer**

Improve every bit of the journey

The more comprehensive the scheme – in terms of solutions offered – the more likely it is to impact on behaviour. This is because we think "door to door" when planning our journeys. People are likelier to walk and cycle more if they feel it is a safe way to reach their school, local high street, or Tube station. On the other hand, if the LTN only changes a few residential streets, people may simply decide to take another route by car, which is in turn more likely to create traffic displacement problems. "Add-ons" really help people change how they get around, and boroughs should also introduce protected cycle lanes and traffic calming on larger roads – so people can move safety between LTNs as well as within them.

Make streets nicer

Traffic filters can be a source of frustration for people who drive, especially if they can't see how they are creating improvements for the neighbourhood, and even more so if they reduce accessibility for some members of the community (for example those with specific mobility needs). The 2020 LTNs didn't include improvements to the look and feel of the public realm – they only added a couple of planters, signage, and in some cases traffic cameras. But improvements to the public realm are an essential component of LTNs: adding trees, planting, benches and wider pavements creates a more pleasant space for residents and visitors – and therefore highlights the benefits of removing through traffic.

Exemptions are double-edged

All low-traffic neighbourhoods maintain vehicle access to homes – they only stop through traffic and make access less convenient for motorists. However, some modal filters do allow through traffic for some types of vehicle. This can include emergency and delivery vehicles as well as taxis and private hire vehicles: in some cases, exemptions have also been given to local residents.

There is a debate on whether these exemptions are desirable. They may increase the acceptability of LTNs among local residents at the time of their introduction, but they also mean it is harder to reallocate road space to other uses – such as pocket parks or play spaces – since there is still a stream of vehicles using the street.

Some low-traffic neighbourhoods only stop through traffic at busy times, with automatic bollards raised during some part of the day. This can work well for high streets or market streets, as it can allow

pedestrianisation or alfresco terraces while ensuring access at other times. For residential streets, time-limited restrictions may mean the LTN is more acceptable to residents, but they also make public realm improvements more difficult. One local authority officer also mentioned that the timing of restrictions itself can become a point of contention and extend public opposition over time.

Support people who are less able to change how they travel

Some people have felt that low-traffic neighbourhoods will not help them, are not designed for them, and are not where they want to live – either because they don't feel able to use other modes of transport to get around, or they prefer to drive. However, addressing the barriers to taking up other modes could help people make some of their journeys differently. Table 1 below shows some of the common barriers to taking up active travel and micromobility options.

Table 1: Barriers to active travel and support to help

Barrier	Possible support to overcome it
People with mobility problems (and the people who care for them) cannot walk, cycle or use public transport.	• Smaller electric vehicles (such as mobility scooters) can be a viable alternative for some people and some journeys. • Financial support to help with costs • Wider pavements, protected lanes and reduced street clutter will make their use easier. • In the short term, ride hailing and car clubs is a solution for some journeys without having to own a car. The cost of ride hailing is high, but may be cheaper than owning a car. Availability of local car hire options will be key. • In the longer term, improvements to public transport access for people with mobility problems are necessary.
Parents travelling with children rely on a car because they see as a more convenient, time-saving or safer option.	• Safer streets for walking and cycling could convince some parents to walk or cycle with children for some journeys (such as school runs) – or let their children travel unaccompanied. • As above, car clubs and ride hailing may be an option for some journeys, and cheaper than owning a car.
Feeling unsafe when riding a bike or scooter	• Protected bike and scooter lanes
High costs of switching	• Bike or bike repair vouchers • Scrappage scheme: for example, offering a new e-bike or e-scooter for an old car – or mobility credits for public transport.
Not having tried to ride a bike, e-bike or e-scooter in the city	• Ensure availability of hire schemes
Not feeling confident on a bike or an e-scooter	• Offer and promote cycling proficiency courses. All boroughs currently offer free training funded by Transport for London, as well as a free online course.
Public transport is not a convenient option: a car is needed for some journeys.	• Offer people's homes and at public transport hubs. This lets people use them for last-mile journeys or trips where a car is necessary. • Improve the public transport offer.

It might be tempting for local authorities to introduce LTNs in areas where people already cycle or walk more, as a way of securing support for the scheme. However, this can mean that areas with worse levels of air pollution and congestion are left out. Securing support for low-traffic neighbourhoods isn't just about introducing them in a convenient place – they should also have enough "add-ons" to support people in making changes to their journeys.

Make a plan to mitigate negative impacts

Local streets are complex places, and low-traffic neighbourhoods can create unintended issues. Tackling these issues early will help address some of the opposition to the scheme and build trust between the council and local residents. Table 2 below shows some examples of the problems that have appeared during the implementation of LTNs in London, and suggests ways they could be mitigated. It is not an exhaustive list.

Table 2: Possible solutions to mitigate negative impacts from low-traffic neighbourhoods

Issue created by a low-traffic neighbourhood	Possible support to overcome it	Who can do this?
Traffic displacement (where it happens) can negatively impact some residents and increase congestion on boundary roads, potentially reducing bus speeds.	• Modelling traffic before implementing schemes. • Monitoring changes outside LTNs early on. • Origin destination surveys on busy streets to understand issues. • Work in partnership with TfL and other boroughs to coordinate impacts across borough boundaries. • Change the location of modal filters if necessary.	Local authorities and Transport for London, supported by government funding
LTN boundaries may reinforce existing inequalities if they are introduced in less-deprived neighbourhoods.	• Monitor whether some groups are more likely than others to benefit from LTNs or face higher costs. • Tailor LTN schemes and support to make sure LTNs reduce existing inequalities (or at any rate do not reinforce them).	Local authorities, supported by independent research teams (e.g. at universities)
Changes to the public realm take time to appear on satnavs, and may confuse visitors, delivery and emergency vehicles. This could lead to vehicles having to reverse, delays, or parked vehicles blocking cycle access	• Introduce a national open database of planned changes to road layouts • Early work with emergency services and delivery companies to improve liaison. • Ensure that new measures are mapped onto online source data for satellite navigation systems. • Where necessary, switch from physical to camera-enforced filters that allow emergency services access.	Government, Local authorities, Transport for London
Reduced vehicle traffic could make some people feel less safe when alone on the street after dark.	• Ensure pavements are well lit by providing human-scale lampposts, lighting local landmarks to help with legibility, and preventing glare or abrupt changes in light levels.	Local authorities, supported by government funding
Bike and scooter users could be speeding on quiet streets.	• Design traffic filters and calming features to ensure all road users travel at safe speeds. • Police to enforce bans on unsafe riding.[46]	Local authorities, Police

Grace period before introducing fines

Although pilots are usually welcomed as a way of showcasing the benefits of a scheme, it can be hard to understand why a scheme is being enforced if it is still at trial stage. A grace period can help people get used to a change without being too harsh. For the first few months of a scheme, boroughs should send contravening drivers letters of notification – but not fines.

Community engagement for low-traffic neighbourhoods

As explored earlier in the report, local authorities' usual best practice in public engagement was hard to follow for low-traffic neighbourhoods introduced during the pandemic. This does not necessarily mean that the usual methods employed are not fit for purpose, or that there is a need for a complete rethink on engagement. But there are some ideas which might help avoid similar situations in future.

Engage early

Communicating and asking questions early on in a decision-making process tends to produce better results. It means people feel more listened to, and it means that the council can set the tone of the discussion, rather than allowing groups with their own agenda to do so. Modern social media (and more traditional local social networks) mean that discussions can move from the town hall to the street corner in days or even hours – if the council isn't speaking at this point, others will fill the vacuum.

Reach out to less-heard groups

Everyone who lives, works, studies or travels in or around an LTN should have the opportunity to have their say – but some voices are heard more than others. These voices often belong to wealthier, older residents who have lived in the area for some time. Making active efforts to engage with people who have not been much heard in the discussion is important. This is particularly true of young people, who often spend a lot of time in the area around their school, college or home, but whose voices are less often heard in public debates. Tradespeople and delivery drivers might also be less engaged in discussions because they come into an area for work – yet their voices will be essential on the specific needs for vehicle access.

It is best practice to not only consult emergency services (which is a statutory obligation), but also disseminate the information to all road users digitally. Government could help with this by setting up a single source of information for proposed and confirmed road access changes across the country in advance of those changes coming in, which satnavs or delivery companies could use.

Be discerning about gatekeepers and representatives

In any engagement process, people may come forward and say that they "represent" certain groups in the area – this could be faith groups, drivers, older people, or others. In many cases, they will be sincerely trying to share views that other people have shared with them. But this doesn't necessarily mean that they have spoken to a diverse or truly representative group of people – so working with them should not replace supporting people to share their views with the council directly.[47]

Let people wear different hats

"Driver", "pedestrian" and "cyclist" are not mutually exclusive groups – many people are all three. Engagement techniques which encourage people to speak about different activities they undertake (or would like to undertake) at different times can support a fuller and more complex conversation. In particular, encouraging people to think about the times that they walk as well as the times that they drive can be useful when discussing the balance of needs between drivers and pedestrians.

Emphasise the local

LTNs and similar schemes are highly local, and they are all different – in geography, local population, local economy, and even their aims. Public engagement that emphasises the local potential effects of change, and points out specific local factors which are relevant to decisions, may help keep discussion focused. This might include choosing headline language which keeps the focus on local specifics – such as "making changes to transport in [our neighbourhood]" rather than "consulting on a low-traffic neighbourhood".

Be honest about the downsides

Any change to transport will have downsides as well as upsides for some people. Being open from the outset of engagement that some people may be inconvenienced will help to build trust. People are more likely to accept changes they don't like if they feel they are being acknowledged – and if they see that the benefits to others outweigh their concerns – than if they are told their objections aren't true.

Try deliberative events

Recent UK experience with citizens' assemblies to tackle the climate crisis has shown that such forums can be an effective way to build consensus between groups who might not have had a shared position at the outset. The key components seem to be a broad (often randomised) selection of participants, time for them to get to know each other, and highly skilled facilitation. The same model may work for the much more local question of LTNs, either using an existing structure or by creating a new time-limited group.

Communicating about low-traffic neighbourhoods

Communications and engagement are hard to separate: all engagement happens through communication, and any communication is likely to lead to people sharing their thoughts and opinions. This section looks at how local authorities can communicate effectively once a decision about an LTN or similar scheme has been made, but it may also be relevant when designing an engagement plan.

Be clear about the local goals

LTNs can have multiple goals: for example, to reduce air pollution, carbon emissions, congestion, noise, and road accidents. All of these are worthy aspirations, but they are not identical, and the balance between them will depend on local circumstances and priorities. It is crucial to be honest and consistent about the council's primary reason for making a change locally – over-emphasising the other benefits can make communication less effective, especially if people feel these secondary benefits aren't relevant to them.

"You can't just put out press releases, you need to equip local community people, having conversations with people that they know and trust to get people on board"
Local government planner

Use local voices and stories

Using trusted local people in communications can make a real difference. Depending on the local goal of the LTN, this could mean inviting an asthma nurse or GP to talk about the health benefits of reduced pollution, a headteacher to talk about easier journeys to schools, a firefighter or paramedic to talk about congestion and response times, or a representative of a parents' group to talk about safer streets for children. Discussing these issues at school gates can also work well to reach a large number of parents. With appropriate safeguarding and consent, using children's own voices can also be powerful.

Be clear about the rules

LTNs and other traffic management schemes in London vary a great deal. Some use moving barriers while others use fixed ones; some operate only at certain times; others allow certain vehicles through. Residents and stakeholders may well know other schemes that are different to the one in their local area. It's vital to be clear and explicit about the rules for your particular scheme, particularly on the matter of access for emergency services vehicles, people with disabilities, and delivery vehicles.

Recognise the sacrifices

Change will always disadvantage some people, even as it helps others. Denying this – in either the engagement or the launch phase – will simply cause distrust. It's usually better to acknowledge that some people will be worse off in some ways as a result of any change, and, where appropriate, to thank them for accepting a change which will make things better for their neighbours.

Be honest about review mechanisms

It can be tempting to deal with criticism of an existing scheme by promising that it will be reviewed and possibly changed. But if that review doesn't happen when people expect it to, trust will be lost. It's important to be clear at the outset about whether and when a scheme will be reviewed, what evidence will be used, and how and when people can give their feedback. In the case of LTNs, there is generally ample scope to review, refine and make modifications – monitoring and learning should be built into the whole process.

Similarly, councils should be clear in their consultations that they are exactly that – consultations – and not a vote on the scheme. Consultation is essential to work out what type of scheme might be needed and its details, but it can't be about whether the scheme should go ahead or not.

Perceptions tend to change with time

Our research has shown that residents tend to accept and even support older traffic management measures in their areas. Residents often oppose them being taken away, even where they cause some inconvenience, because they appreciate the benefits of quieter streets. New residents tend to accept traffic restrictions as they are, and may even choose a place to live because it is good for walking and cycling or has lower pollution.

In many cases, opposition to new LTNs will also reduce over time. As such, repeated engagement and monitoring of perceptions over time will be a useful way for authorities to understand and address both perceived and actual impacts in their communications.

Build an evidence base

Boroughs have understandably been challenged to show why low-traffic neighbourhoods are necessary, and to prove that they are effective. Monitoring the impact of schemes enables local authorities to make the case for a scheme, respond to arguments based on evidence, and address concerns more quickly. Some boroughs have deployed comprehensive impact monitoring inclusive of air pollution, bus speeds, and emergency vehicle response times. They also survey residents on how LTNs are changing how they get around.

Try to depoliticise decisions

In several boroughs, discontent with LTNs has been used as a political football by some councillors, and this has often entrenched positions rather than enabled solutions that improve the schemes. While it is perhaps inevitable that public discontent will be reflected in local politics, there are ways to bridge the divide. Boroughs could, for example, introduce cross-party review panels for highway schemes as a way to make conversations around LTNs more productive. Citizen assemblies could also inform decisions made by councillors and help to depoliticise them. It's clear that better discussion about LTNs or similar schemes will lead to better outcomes.

Use another name

The term "low-traffic neighbourhoods" has become associated with the 2020 wave of LTNs, so local authorities could look for a new name that shows they want to deliver different schemes in a different way. Some local authorities have named their schemes according to the local goal they want to highlight – such as Healthy Neighbourhoods, Quiet Neighbourhoods or People-Friendly Streets.

5. Complementary measures to LTNs

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Many people currently rely on private cars to travel quickly and conveniently, and this widespread reliance calls for a comprehensive solution. No matter how effective low-traffic neighbourhoods are, they can't remove our reliance on the private car alone. Although they suit local streets, they do little to reduce the traffic on main roads, and in some circumstances can displace traffic onto them. They also do not facilitate longer trips that may be challenging to make by public transport or active travel. Offering complementary solutions will help achieve behavioural change, and it is also likely to reduce the backlash from residents who might otherwise feel they are being restricted in their ability to move around.

There are many complementary solutions available to help meet the objectives of low-traffic neighbourhoods and shift private car traffic to more sustainable modes of transport. Table 3 below summarises the most promising solution.

Table 3: Comparison of complementary solutions to make LTNs more effective

	Solution	What this involves	How this supports LTNs	Who can do this	Type of journey this impacts
Street access and layout	**Protected lanes for small vehicles (bikes, scooters)**	Reallocating road space, redesigning junctions	Encourages take-up of small vehicles	Local authorities, Transport for London (backed by government funding deal)	Short to medium distance
	School streets	Access restrictions for private cars during school times	Encourages people to walk, cycle or take public transport to school by making it safer	Local authorities	School trips, circa 25 per cent of morning peak-hour car trips[48]
	Pedestrian high streets and town centres	Access restrictions for some or all vehicles during business hours	Encourages take-up of sustainable options for town centre trips	Local authorities	Shopping, leisure or trips to access public services, some commuting
	Traffic calming, pedestrian crossings	Wider pavement to slow turning vehicles, speed bumps, pedestrian priority streets	Encourages take-up of walking, cycling and scooters	Local authorities, backed by funding	Shorter to medium distance
	Bus priority measures	Bus gates, traffic light management	Makes the bus a quicker option	Local authorities, Transport for London	All journeys – with greatest impact on congested roads

	Solution	What this involves	How this supports LTNs	Who can do this	Type of journey this impacts
Pricing	**Pay per mile road user charging**	Replacing congestion charge and ULEZ with a charge for all road users. This charge could vary based on distance driven, vehicle emissions, levels of congestion, and availability of public transport	Incentive to use sustainable transport Income can be reinvested in measures to increase sustainable travel	Mayor of London, supported by government legislation	All journeys – with greatest impact at peak hours, on congested roads, and within inner London
	Workplace parking levies	Charge employers for each parking space they provide to their workers	Encourages employers to offer sustainable travel options to their workers	Local authorities, supported by Transport for London	Commute
	Increase controls on parking and introduce dynamic pricing for on-street car parking	Increase coverage of Controlled Parking Zones Increase charges for on-street parking, especially where in short supply Reduce charges for on-street bike parking (or provide free)	Discourages car ownership Offers a secure place to park a bike for people who lack bike storage at home	Local authorities	Most journeys
Alternative mobility solutions	**Boosting micromobility (cycles and scooters)**	Increase take-up of bikes and scooters (including electric and shared) by providing protected lanes and a denser network of hiring options	Alternative to the private car for many trips, possibly quicker and more reliable too	Mayor of London, local authorities, private mobility providers	Shorter journeys – two-thirds of car trips could be made by bike, e-bike and e-scooter in under 20 minutes or less, with most of these trips in outer London[49]
	Boosting public transport options	Invest in improving the frequency, reliability, accessibility, affordability and size of the public transport network	Alternative to private car for many trips	Transport for London, with funding settlement from government	Most journeys
	Scrappage schemes associated with mobility credits	Opportunity to trade in a private car for vouchers that could include public transport, bike & scooter (for hire or purchase), or car clubs	Supports shift to sustainable mode of transport	Transport for London, local authorities, private mobility providers	Most, if not all journeys
Managing deliveries	**Parcel pick up, cargo bike deliveries**	Convenient parcel pick-up and drop-off points, delivery fulfilment depots nearer to homes	Reduces traffic on all roads	Parcel carriers, Mayor of London, local authorities, landowners	Delivery journeys

Cost will of course be a core consideration for taxpayers. However, some of these solutions are primarily about changes to regulation, which would be relatively cheap to introduce and could even raise revenue. This could in turn be used to help people who are less able to pay for the shift to sustainable modes of travel.

Other solutions would require significant investment – the focus of the next chapter. Delivery vehicles also represent a fast-growing share of road traffic, and though they fulfil essential services, they come with large costs too. Centre for London has looked specifically at policy around delivery vehicles and freight in its Worth the Weight report.[50]

6. Recommendations

Almost all London boroughs have declared a climate emergency. They will want to encourage sustainable journeys at the same time as tackling air pollution, congestion and road safety head on. The previous chapter showed how boroughs can make their low-traffic neighbourhoods a success – but the solutions proposed will need funding.

Boroughs are keen to make changes if funding is available for them. In 2013, 18 of London's 20 outer London boroughs applied for funding for Mini Holland schemes, but only a few could benefit since the three winning boroughs were to receive 90 per cent of the total £100m budget.[51]

In 2020 nearly all London boroughs applied to the government's active travel fund, but together with TfL they received a much lower amount of funding – £25m. This package was aimed at delivering LTNs as well as other measures, such as enabling social distancing on high streets and implementing low speed limits.[52] Given the small amount of money involved, and the government's requirement to implement LTNs quickly, London boroughs were not able to follow their usual practice on consultation, or offer complementary measures that would support people switching to other transport modes.

With more funds, Transport for London and the boroughs could take a comprehensive approach to how people are travelling and support them to make sustainable choices – rather than letting them feel they have no choice but to drive.

The government should give the Mayor of London and the boroughs new powers to raise funds themselves for the delivery of sustainable travel measures such as low-traffic neighbourhoods.

Given its difficult financial position, Transport for London will be reluctant to invest in measures that don't generate income (such as LTNs) as opposed to passenger services. So low-traffic neighbourhoods and complementary measures will need a new stream of funding – for example by introducing road user charging.

Until new fundraising powers are introduced, the government should make funding available to local authorities and Transport for London so that they can engage residents meaningfully over LTNs and support those who are most impacted with complementary measures.

The government should make this funding available over several years so that boroughs can plan for comprehensive LTN schemes, take time to engage residents, and if necessary, stagger LTNs and learn along the way.

Local authorities considering implementing an LTN should follow best practice, including engaging early with both the public and emergency services, and introducing other traffic decarbonisation measures – such as controls on parking or offering alternative mobility solutions.

Good practice on engagement around LTNs is set out in Chapter 4. There are also many complementary solutions available to help meet the objectives of low-traffic neighbourhoods and shift to more sustainable modes of transport – from parking controls to mobility credits that help with the cost of using other modes of transport. These are set out in Chapter 5.

The Mayor of London should call on local authorities to maximise coverage of low-traffic neighbourhoods or similar schemes in their areas.

This could be done in the Mayor's Transport Strategy or in action plans (Cycling Action Plan, Walking Action Plan and Vision Zero Action Plan)

London Councils and Transport for London should create an LTN Knowledge Hub that helps boroughs learn from each other's experiences. The Hub should be open so the public and local campaign groups can access it too.

Boroughs have very different levels of expertise when it comes to low-traffic neighbourhoods: some have been introducing them for years, others haven't introduced any.

Underlying recommendations

The government should give Transport for London a long-term funding settlement.

Getting people to travel by other means than private car only works if public transport is a convenient, affordable, accessible and safe option. Transport for London's income mostly comes from passenger fares, and has been hit very hard by the low levels of ridership during the pandemic. Fare income also cannot cover the capital investment necessary to keep up and grow the transport network, as this would make public transport unaffordable for many. It's therefore essential that the government ensures Transport for London can continue to run services and improve the city's public transport.

The government should let boroughs enforce speed limits, after consultation with Transport for London

Boroughs should ensure that all residential areas – not just those with LTNs – benefit from improvements to air quality and road safety. In 2020, 87 per cent of cars and vans were found to be speeding on 20 mph roads nationally; 54 per cent were speeding by 5 mph or more and 20 per cent by 10 mph or more.[53] These are national figures, but since 20 mph roads tend to be in cities, the London picture is likely to be similar.

Currently only the Metropolitan Police can enforce road speeds, but they are stretched in terms of resources, and boroughs have some capacity to support enforcement since they already enforce parking rules. Since December 2021 local authorities have been able to apply to issue fines for moving traffic.[54] It would make sense for this to be a possibility in London too, and boroughs to fine for speeding. Transport for London should be consulted before boroughs apply this power, and should review regularly how this power is used, to avoid local authorities using fines solely as an income generator, and to maintain a strategic view of the city. The Metropolitan Police would retain exclusivity on its powers to take speeding motorists to court.

Appendix

Table 4: Changes in walking and/or cycling inside and outside selected London LTNs

Study Area	Change in car traffic within the LTN (average)	Change in car traffic on peripheral roads (average)	Assessment period
Implemented before the pandemic			
Enfield, Waltham Forest, Kingston[55]	Residents did 41 minutes of additional walking or cycling in the previous week (mostly walking) compared to residents in similar areas that did not have the scheme.	2016-2018	Longitudinal resident survey (the same residents were surveyed over three years)
Implemented during and after pandemic			
Lambeth – Railton[56]	58% increase in cycling inside the LTN	June 2020 – December 2020	Traffic counts
	31% increase in cycling on peripheral roads	June 2020 – December 2020	
Lambeth – Tulse Hill[57]	69% increase in cycling inside the LTN	November 2020 – January 2021	
	43% increase in cycling on peripheral roads	November 2020 – January 2021	
Lambeth – Oval to Stockwell[58]	87% increase in cycling inside the LTN	December 2019 – April 2021	
Waltham Forest – Maryland[59]	125% increase in cycling inside the LTN	October 2018 – October 2021	
Waltham Forest – Odessa[60]	172% increase in cycling inside the LTN	October 2018 – October 2021	
Waltham Forest – Langthorne[61]	37% increase in cycling inside the LTN	October 2018 – October 2021	
Waltham Forest – Montague and Woodhouse[62]	56% increase in cycling inside the LTN	October 2018 – October 2021	

Note: In some cases the data predates enforcement of LTN rules, so compliance rates may have been lower, which may have impacted the schemes' effectiveness. The table above reflects the availability of monitoring reports at the time of writing. This data was compiled in January 2022 and has not been updated since.

Table 5: Changes in car traffic inside and outside selected London LTNs

Study Area	Change in car traffic within the LTN (average)	Change in car traffic on peripheral roads (average)	Assessment period
Implemented before the pandemic			
Walthamstow Village (2016)[63]	44% decrease on average in the Mini Holland area	Some boundary roads saw large increases in traffic initially. This reduced over the course of the study, but on some roads it remained higher than before the scheme.	February 2015 – July 2016
Implemented during and after pandemic			
London Borough of Lambeth – Railton[64]	58% decrease	11% decrease	June 2020 – December 2020 (prior to enforcement)
London Borough of Lambeth – Tulse Hill[65]	35% decrease	7% increase	November 2020 – January 2021 (prior to enforcement)
London Borough of Lambeth – Oval to Stockwell[66]	25% decrease	8% decrease, but some nearby roads saw up to 28% more traffic.	December 2019 – April 2021
London Borough of Hackney – London Fields[67]	44% decrease	21% decrease	July 2020 – November 2020
London Borough of Hackney – Homerton[68]	35% decrease	5% decrease	2018 or 2019 (month varies) compared with May 2021
Waltham Forest and Newham – Maryland[69]	76% decrease	19% increase	October 2018 – October 2021
Waltham Forest and Newham – Odessa[70]	61% decrease	3% decrease	October 2018 – October 2021
Waltham Forest and Newham – Langthorne[71]	31% decrease	9% increase	October 2018 – October 2021
Waltham Forest and Newham – Montague and Woodhouse[72]	22% decrease	2% increase	October 2018 – October 2021

Notes: All data in this table is based on traffic counts. In some cases the data predates enforcement of LTN rules, so compliance rates may have been lower, which may have impacted the schemes' effectiveness. The table above reflects the availability of monitoring reports at the time of writing. This data was compiled in January 2022 and has not been updated since.

Table 6: Changes in car use or ownership inside and outside selected London LTNs

Study Area	Change in car use or ownership	Assessment period	Assessment method
Kingston, Enfield and Waltham Forest Mini Hollands[73]	• People living in LTN areas have become less likely to own a car, and to have used a car in the past week, and spent less time using a car, than people living in other outer London boroughs where Mini Hollands weren't introduced.	2016-2019	Longitudinal resident survey (the same residents were surveyed over three years)
Kingston, Enfield and Waltham Forest Mini Hollands[74]	• In the Waltham Forest LTN there was a 7% decrease in car and van ownership per adult compared to outer London areas without Mini Hollands. This data is after adjusting for the age profile of the LTN area • In other Mini Holland areas that didn't include an LTN but had other active travel infrastructure (such as protected bike lanes) there was a 4% decrease in car and van ownership per adult. This data is after adjusting for the age profile of the Mini Holland areas.	2012-2019	Driver and Vehicle Licensing Agency (DVLA) data on car and van ownership

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32 - 33 Hatton Garden
London , EC1N 8DL
T: 020 3757 5555
hello@centreforlondon.org
centreforlondon.org
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