

# RECLAIM THE KERB: THE FUTURE OF PARKING AND KERBSIDE MANAGEMENT

*Silviya Barrett,  
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Washington-Ihieme*

London's increasing population and changing travel habits are putting our roads and streets under pressure. There is now a growing consensus that tackling the challenges of congestion, air pollution, carbon emissions, road danger and physical inactivity requires a reduction in motor vehicle usage and an increase in the use of public transport, walking and cycling.

Parking policy is one tool that can help us make the change. This report examines how car ownership and usage differs across London, and has changed over time. It explores the challenges facing the city and its residents as they transition to more sustainable, efficient ways of travelling. It looks to the future and explores the opportunities for the boroughs and the Mayor to manage the kerbside in a way which will support a greener, healthier and more pleasant environment for everyone.

This project has been generously supported by Supporting Sponsors; AppyWay, Enfield Council, Hackney Council, London Borough of Barnet, London Borough of Camden, London Borough of Hounslow, London Borough of Waltham Forest and Westminster City Council.

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# **RECLAIM THE KERB: THE FUTURE OF PARKING AND KERBSIDE MANAGEMENT IN LONDON**

*Silviya Barrett, Joe Wills and Mario Washington-Ihieme*

Published by Centre for London, March 2020



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## Acknowledgements

The authors would like to thank all those who provided expert advice and guidance on this report, especially the members of our Advisory Group: Gossica Anichebe (Project Officer, Parking and Markets Service/Street Trading, Hackney Council); Ben Boutcher-West (Head of Mobility, AppyWay); Hugh Brennan (Transport Programme Manager, Highways and Public Realm, Westminster City Council); Anthony Hall (Head of Parking Services, London Borough of Waltham Forest); Philip Hoare (Head of Parking & Infrastructure, Environment Commissioning Group, London Borough of Barnet); Gareth James (Senior Transport Project Officer, London Borough of Hounslow); Nick Lester-Davis (Consultant); Andrew Luck (Transport Manager, London Councils); Sam Margolis (Transport Policy and Programmes Team Manager, London Borough of Camden); Dominic Millen (Group Leader – Transport Planning and Policy, Enfield Council); Julian O'Kelly (Head of Technology, Innovation & Research, British Parking Association); and Josephine Vos (Manager, London Plan and Planning Obligations team, Transport for London).

We are particularly grateful to all our borough and stakeholder interviewees who generously offered their time and expertise to the project.

Special thanks are also due to Martin Wedderburn for his support with proposals, analysis and drafting, as well as the team at Centre for London. The views in this report are nevertheless solely those of the authors, and all errors and omissions remain our own.

This project would not have been possible without our Supporting Sponsors; AppyWay, Enfield Council, Hackney Council, London Borough of Barnet, London Borough of Camden, London Borough of Hounslow, London Borough of Waltham Forest and Westminster City Council.



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# Summary

London's growing population and changing travel habits are putting our roads and streets under increasing pressure. There is now a growing consensus that tackling the challenges of congestion, air pollution, carbon emissions, road danger and physical inactivity requires a reduction in motor vehicle usage and an increase in the use of public transport, walking and cycling. Additionally, we must ensure that any car journeys that cannot be avoided are carried out in shared, low-emission vehicles. We call this shift in how we move around the city "New Urban Mobility".

Parking policy is one tool that can help achieve this shift. This report examines how private car use has changed over time, as well as the value that car owners and non-car-owning residents place on different kerbside uses. It also examines what boroughs can do to encourage and enable people to switch to sustainable modes of travel and create a greener, healthier and more pleasant environment for the benefit of everyone.

Based on data analysis, borough and stakeholder consultation, and a survey of over 1,000 Londoners, we found that:

### **Personal travel habits are changing...**

- People are travelling less for business and leisure.
- The number of trips driven per person per day has fallen by 23 per cent since 2013/14.

### **... but the Mayor's target for sustainable travel remains a stretch.**

- The Mayor's Transport Strategy aims for 80 per cent of all journeys to be by public transport, walking or cycling by 2041.
- While the proportion of trips in London made by public transport, walking or cycling increased from 59 per cent in 2009 to 63 per cent in 2015, there has been no change over the last three years.

### **Meanwhile car ownership remains relatively high...**

- 56 per cent of households in London own a car and this rate has only fallen by four per cent in the last 10 years.

### **...and congestion, air pollution and carbon emissions from vehicle use are still major concerns.**

### **Parked cars take up a significant amount of space...**

- There are more than three million licensed vehicles in London, and the average car is parked at least 95 per cent of the time.
- 43 per cent of all cars are parked on-street, taking up well over 1,400 hectares of space (equivalent to 10 Hyde Parks in size).

### **...and land used for car parking is valuable...**

- Parking spaces have a market value up to 10 times higher than the annual cost of a resident's permit.
- Collectively, London boroughs made an average annual surplus on parking of £376 million between 2014/15 and 2018/19, which was then spent on other transport services.

### **... but short stay (pay and display) charges are subsidising resident parking permits.**

- Annual operating costs per parking space far exceed resident parking permit revenues, averaging £336 for inner London (compared to average resident permit costs between £51-£230), and £295 for outer London (compared to average permit costs between £29-£154).

**While Londoners who need to drive also need to park, better use of street space would benefit everyone:**

- 83 per cent of Londoners are very or fairly concerned about global climate change, and 77 per cent are concerned about local air quality.
- 49 per cent of Londoners believe children cannot safely play outside or travel by foot or bike on the streets in their neighbourhood.
- Londoners want to see trees and green spaces, pavements free of clutter, children's play space and community/recreation space given priority on their streets.
- On-street parking for residents is only the fifth-highest priority for street use: just 31 per cent of non-car owners believe it should be high priority for street use in their local area, compared to 52 per cent of car owners.

## Achieving New Urban Mobility

**A more intelligent and dynamic approach to managing parking and the use of kerb space could promote alternatives to car ownership and use, provide more space for the things Londoners value, enhance the environment, and offer a more efficient service for essential trips by car.**

There are a number of actions that boroughs at different stages of the journey towards New Urban Mobility can take to enable less car-reliant lifestyles, and to create a greener, healthier and more pleasant environment for the benefit of everyone. We are calling for boroughs to:

- Develop kerbside strategies that allocate road and kerb space in accordance with clear use hierarchies, and commit to reallocating a certain percentage of kerb space to higher priority uses. The Mayor should support boroughs with guidance to include kerbside strategies in their Local Implementation Plans.
- Regularly review the coverage, size and operating hours of Controlled Parking Zones to ensure they meet local and mayoral policy objectives, engaging a diverse range of residents in the consultation process. To gradually reallocate road space, boroughs should introduce a cap on the number of permits issued, using waiting lists for new applications or limiting eligibility for new residents.
- Set residential parking permit charges at a level that helps achieve strategic modal shift objectives and fully covers the total operating costs of residential parking. All boroughs should move towards a harmonised emission-based charging structure, alongside escalating charges for additional vehicles.

- Consider introducing a Workplace Parking Levy in areas with significant levels of private workplace parking as part of a package of measures to shift travel-to-work patterns. Boroughs should also review their planning policies to enable large employers to reduce private parking and facilitate modal shift among employees.
- Ensure there is affordable and accessible car club provision across London by allocating sufficient on-street parking space and charging a fair price for them. London Councils should draw up a recommended regulatory and pricing framework for car club and bike hire operation to support harmonisation across boroughs. Transport for London (TfL) and the boroughs should launch a system of mobility credits that can be used on public transport and private mobility services, and promote them more widely in the run-up to the expansion of the Ultra Low Emission Zone as incentives for reducing car ownership.
- Embrace the opportunities created by new technology to manage demand for kerb space – including automated charging, dynamic space designation, micro-transactions for ultra-short-stay parking, and dynamic pricing for short-stay parking. Central government should enable dynamic management by allowing for charging in small increments and introducing dynamic Traffic Regulation Orders.



# Introduction

In recent years the rise of digital services such as Uber, Amazon and Deliveroo has changed the way that we consume goods and travel around the city. Londoners are driving less, but we have more goods and services delivered to our doorstep: in addition to a growing population, this has placed our transport system – and especially our finite road space – under mounting pressure.

Congestion has also worsened, and London has one of the worst traffic levels of all European cities,<sup>1</sup> placing a heavy burden on its economy and environment. While London's roads have become safer, hundreds of people are still killed and thousands seriously injured on our roads every year, with the bulk of these being vulnerable road users (pedestrians, cyclists or motorcyclists).

Air pollution levels regularly exceed international limits and, alongside low physical activity levels, affect Londoners' health and wellbeing. While some industries have made big strides in reducing carbon dioxide, emissions from the transport sector have continued to increase. A shift away from petrol and diesel in favour of electric vehicles can help reduce carbon emissions and air pollution. But electric vehicles still generate non-tailpipe pollution (from tyre, brake and road wear), as well as carbon emissions (in the process of manufacturing, disposal and charging – if the energy used is not from renewable sources). They also contribute to congestion and road danger, and take up the same amount of space on the roads as “ordinary” cars.

There is now a growing consensus among city and borough policymakers that, if we are to accommodate a growing population in a sustainable way and improve quality of life for everyone in the city, we need not only cleaner cars but also fewer cars. We need to encourage greater use of the most efficient, sustainable, healthy forms of travel, reduce our overall reliance on cars, and use vehicles as efficiently as possible where their use is unavoidable (through shared journeys and fully loaded delivery vehicles, for example). The Mayor of London is leading the way, with the Transport Strategy setting a target that the proportion of all journeys made by public

transport, walking and cycling needs to increase from 63 per cent (currently) to 80 per cent by 2041, representing a net reduction of three million car journeys a day.<sup>2</sup>

The number of private car journeys in London is falling, but car ownership remains relatively stable. For those who don't need to use their cars regularly, the availability and cost of parking space can influence whether they retain them or instead shift to walking, cycling, public transport or shared vehicles.

**This report examines how boroughs can use their parking policies to make a difference, but it also looks at the allocation of kerb space to different uses more broadly. This is because the kerbside is used not only by residents but also by visitors, businesses, tradespeople, taxis, delivery vans and bikes. The amount of kerb space allocated to vehicles and people can be a significant factor in encouraging travel by public transport, walking and cycling – as well as driving.**

There will of course continue to be a place for private cars in the short-to medium-term, particularly for people with mobility difficulties or in parts of London less well served by public transport. The shift toward sustainable transport cannot happen without providing Londoners with access to a wide range of attractive, affordable and accessible alternatives. This means large-scale investment in public transport capacity, prioritising road space for walking and cycling infrastructure, enabling shared vehicle use through car clubs and bike hire, and (potentially) creating mobility services such as demand-responsive shuttles. Again, kerb space allocation has a major role to play in enabling these changes.

Parking can be viewed as a service to car-owning residents, and it is one that many Londoners rely on. However, almost half of London households do not own a car. Yet we all use our streets walk to the shops, visit our neighbours, and as public spaces to play, rest and socialise. This report argues for kerbside management to respond to the needs of all users and create a greener, healthier and more pleasant environment for the benefit of everyone.

## Scope and methodology

The scope of this report is limited to on-street parking and other kerbside uses. While off-street parking also has big implications in terms of land use, only small parts of it are under borough control. In the case of new developments, Centre for London's recent *Building for a New Urban Mobility* report argued that any parking provision in developments should be off-street, and designed such that the space can be converted to other uses as demand for private car use declines.<sup>3</sup>

The findings in this report are based on research undertaken through a combination of methods, including:

- **Data analysis.** Literature review and analysis of publicly available datasets, as well as information supplied to us by kerb management company AppyWay.
- **Interviews.** To better understand the approaches and limitations of current parking policy, we approached transport policy leads at all London boroughs. 16 of the 33 authorities responded to our requests. We also interviewed a number of stakeholders engaged in related policy and practice areas.
- **Survey.** To gain insight into the public's views of parking and other kerbside uses, we commissioned polling company Savanta ComRes to undertake a survey of Londoners: 1,005 London residents were interviewed online between 17 and 23 January 2020. (Data is representative of all London residents by age, gender, region and car ownership. Savanta ComRes is a member of the British Polling Council and abides by its rules.)

Chapter 1 of this report examines how Londoners' car usage has changed over time, how this differs across the capital, and how much space is physically taken up by parked cars on our roads. Chapter 2 asks whether car owners are paying a fair price for storing their vehicles on public roads and utilises a number of different methods

to estimate the monetary value of a parking space. Chapter 3 examines the value Londoners place on other street uses and how the priorities of car owners and non-car owners compare. Chapter 4 summarises London boroughs' current approaches to parking policy and the limitations many of them face. Finally, Chapter 5 makes recommendations on the measures that boroughs should deploy in order to rebalance kerb space with the needs of all users in mind.



**1.**

# **Car ownership, use and parking in London**

This chapter examines how Londoners' car ownership and use has changed over time. It also looks at how these measures differ across the capital, and analyses what they mean in terms of the amount of space physically taken up by parked cars on our roads.

### **Travel habits are changing, but modal shift is slow**

London's population continues to grow, albeit at a slower pace than in previous years. In the 10 years to mid-2018, London's population grew by 14 per cent to reach 8.9 million people.<sup>4</sup> But travel demand has not changed at the same pace. The overall number of trips made by London residents increased by eight per cent in the 10 years between 2009 and 2018, but the rate of daily trips per person declined by 11 per cent over the same period.<sup>5</sup> The sharpest declines have been in trips by car drivers (down by 23 per cent since 2013/14), for shopping or personal business (down by 32 per cent since 2011/12), and for leisure purposes (down by 23 per cent since 2013/14) although these remain the purposes that people make the most trips for.<sup>6</sup>

This is a consequence of changing lifestyles: the rise of e-commerce and online entertainment means that people are increasingly having shopping delivered (more than a fifth of Londoners receive at least one online purchase delivery a week).<sup>7</sup> Meanwhile, a squeeze on disposable incomes has affected discretionary consumer spending, such as on leisure trips.<sup>8</sup> A shift towards more flexible working patterns and remote working may be another contributing factor. In 2017/18, one-third of London adults worked either from home or from multiple locations, up from a quarter in 2012/13.<sup>9</sup>

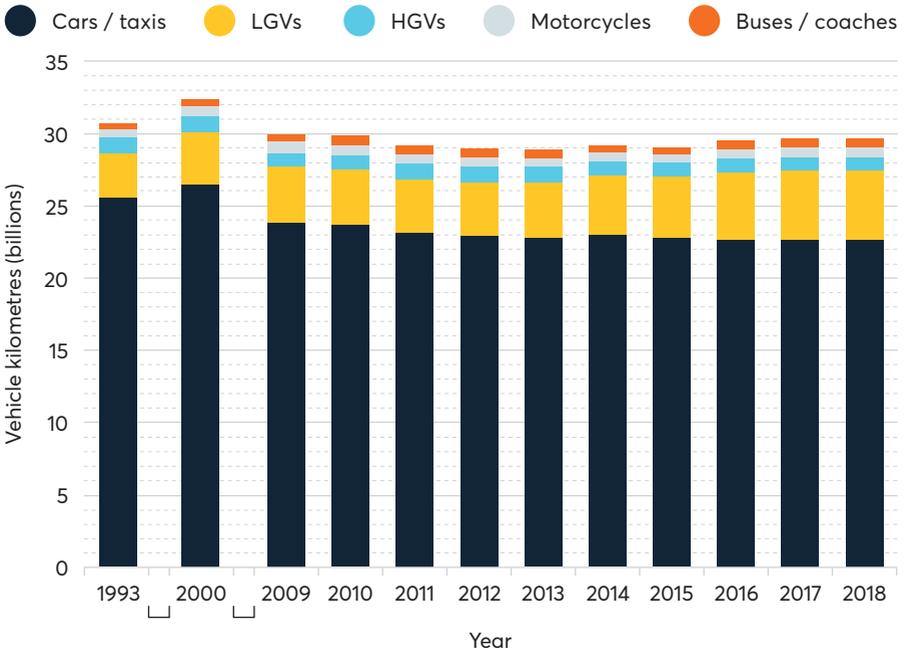
These trends are in line with our survey of adult London residents, which found that leisure (e.g. visiting friends, the cinema, or a restaurant) and running errands (e.g. visiting the supermarket, post office or bank) were the most common reasons Londoners used cars (private or car club). 67 per cent of car owners drove for leisure purposes at least once each week, and 81 per cent did so for running errands. By comparison, 50 per cent drove

at least weekly to commute to work, study or other business, and 31 per cent did so for the school run or other childcare.

Despite the changes in travel patterns, the shift towards sustainable modes has been slow. The proportion of trips made by public transport, walking or cycling (as the main trip mode) increased from 59 per cent in 2009 to 63 per cent in 2015 – but there has been no change in this number over the last three years.<sup>10</sup> This presents a significant challenge to reaching the Mayor's target of 80 per cent by 2041.

In terms of overall vehicle usage there was a decline over the longer term, but this amounted to only two per cent between 2009-2018, while total vehicle kilometres driven in London remained steady (see Figure 1), albeit decreasing relative to a growing population. Whereas distance travelled by car decreased slightly (by five per cent in 10 years), there was a notable increase in van usage over the same period (26 per cent). Vans, or Light Goods Vehicles (LGVs), make up 16 per cent of the kilometres travelled by all motorised vehicles, and 80 per cent of the kilometres travelled by freight vehicles in London.<sup>11</sup>

**Figure 1: Total vehicle kilometres driven in London (billions), by vehicle type**



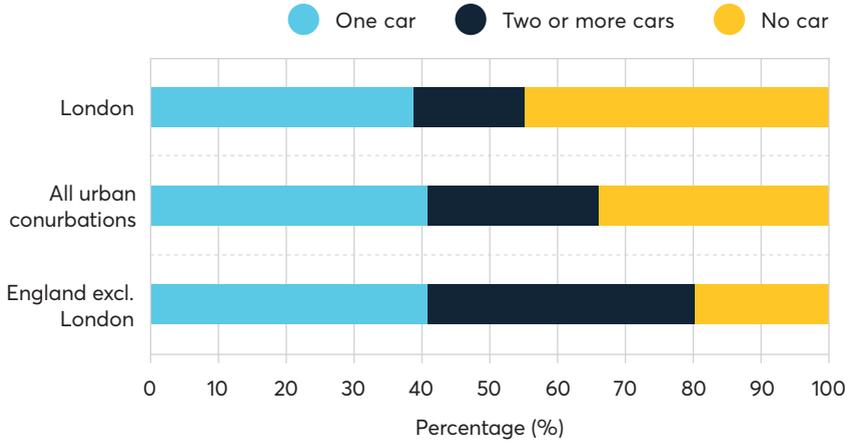
Source: Table TRA0206: Road traffic (vehicle kilometres) by vehicle type and region and country in Great Britain, Department for Transport, 2019.

### Car ownership in London has changed little over time

Rates of car ownership in London are lower than in the rest of the country. While 80 per cent of households in the rest of England have at least one vehicle, only 56 per cent of households in London do so. London also has lower car ownership rates than other English cities (see Figure 2). Car is the usual mode of travel to work for only 29 per cent of Londoners, compared to the English average of 67 per cent.<sup>12</sup>

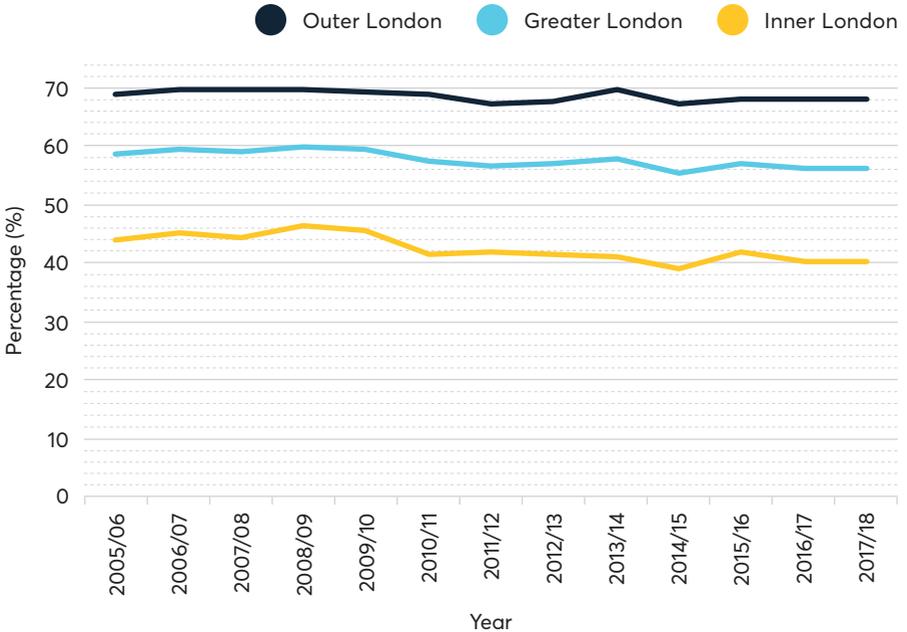
In recent years, commentators have discussed a shift away from car ownership towards “Mobility as a Service” (or MaaS) – using services such as private hire, car clubs or bike hire instead of owning vehicles. In reality, car ownership in London has remained largely unchanged over the last few years. Looking at data from 2005/06 to 2017/18, ownership peaked at 60 per cent in 2008/09, and has declined by only four per cent since then (see Figure 3) – though with a more rapid decline in inner London.

**Figure 2: Cars/vans per household, 2017/18**



Source: Table NTS9902: Household car ownership by region and Rural-Urban Classification, National Travel Survey, Department for Transport, 2019.

**Figure 3: Proportion of households with a car, by area of London, 2005/06 - 2017/18**



Source: London Travel Demand Survey, Transport for London, 2019.

Unsurprisingly, car ownership varies by area of London, with public transport availability undoubtedly a factor. The inner London boroughs of Islington, Tower Hamlets, Hackney and Westminster have the lowest car ownership rates, while the outer London boroughs of Sutton, Hillingdon, Havering and Bromley have the highest (see Appendix 1). But there are also boroughs that buck the trend: the inner London boroughs of Wandsworth and Lewisham have relatively high levels of ownership, and the outer London boroughs of Waltham Forest, Barking and Dagenham and Brent have relatively low levels.

Factors other than public transport availability affect car ownership. The literature suggests that these include:

- **Affluence.** Car ownership rises steadily with household income, and higher income households are much more likely to own two or more cars.<sup>13</sup>
- **Parking availability.** Households without access to off-street parking are more than twice as likely not to own a car compared to households with off-street parking.<sup>14</sup>
- **Household composition.** Couples are more than twice as likely to own a car as single adult and lone parent households.<sup>15</sup>
- **Accommodation type and tenure.** People who live in a house, either with a mortgage or as outright homeowners, are more likely to own a car than those who live in a flat or rent their home.<sup>16</sup>
- **Age.** Younger Londoners have the lowest levels of car ownership (although many live with parents who own cars).<sup>17</sup>

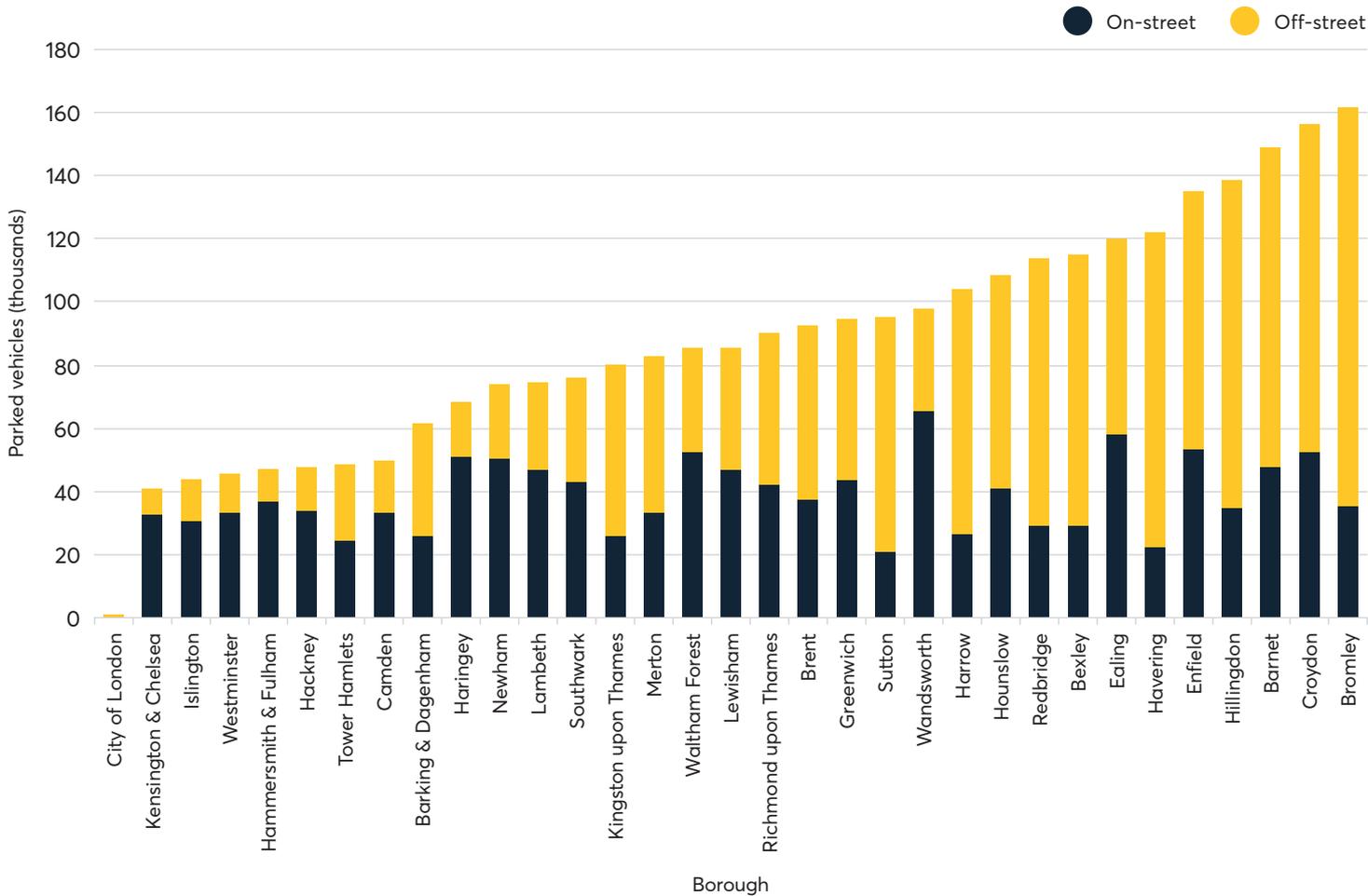
### Cars take up valuable public space

There are more than three million licensed vehicles in London, and the average car is parked for at least 95 per cent of the time.<sup>18,19</sup> TfL data shows that 43 per cent of all cars are parked on-street (at the kerbside) rather than off-street (in parking lots, garages and driveways). A simple calculation taking into account the size of a standard parking space shows that parked vehicles take up well over 14 km<sup>2</sup> (1,400 hectares) of space on our roads and streets – or the size of 10 Hyde Parks.

Data from kerb management company AppyWay indicates that there are the equivalent of over one million paid resident and short-stay (pay and display) parking spaces in London, taking up over 5,000 kilometres of kerbside space.<sup>20</sup> (This does not include uncontrolled kerb space that is free to park in at any time.) To put this in perspective, this is roughly the distance from the UK to the US across the Atlantic Ocean.

The location of parking spaces also varies across London. In outer London only one-third of cars are parked on-street, but in inner London – with much denser housing and fewer homes with private garages – two-thirds of cars are parked at the kerbside (see Figure 4 and detailed borough breakdown in Appendix 1).

Figure 4: Vehicles parked on-and off-street, by borough, five-year average, 2013/14 - 2017/18



Source: London Travel Demand Survey, Transport for London, 2019.



**2.**

# **The value of parking space in London**

Parking spaces serve the needs of a wide range of users, including residents, workers, shoppers, visitors, delivery drivers, taxis, and private hire passengers. However, they also reduce space for pavements, cycle lanes, and other social and environmental features such as benches or microparks. Car owners may pay for the privilege of parking – in the form of short-stay parking spaces and residential parking permits – but are they paying a fair price?

There are a number of ways that this question can be approached. Often-quoted international examples have focused on the costs of building and operating multi-storey parking structures, the added costs of providing parking in new buildings, and the potential reduction in available space for more affordable housing or other amenities.<sup>21</sup> Other investigations have focused on quantifying the environmental costs arising from increased parking provision.<sup>22</sup> However, there is little empirical evidence from London and the UK on the matter. To answer this question in a London context, this chapter considers a number of alternative approaches to pricing an on-street residential parking space.

### **Residents are underpaying for valuable public space**

Using residential land values, property consultancy JLL estimates that the 3,200 hectares taken up by vehicles in London is worth £172 billion.<sup>23</sup> Using illustrative land values, Table 1 compares the capital value per parking space across selected London boroughs to what residents pay for a year's parking. Treating the parking permit as an annual rental payment, the yield on the capital value is very low – less than one per cent in most cases. However, while this comparison is useful for car parks – which could potentially be converted into homes – few on-street parking spaces would be realistically developable.

A further approach is to compare resident permit costs with the market value of parking. The rise of peer-to-peer rental of parking spaces through online platforms like JustPark has allowed an accurate comparison between the price the market can support for a parking space and what local authorities are currently charging (see Table 2). The fact that prices across London for

**Table 1: Comparison of residential parking permit costs with residential land value in several boroughs**

Borough	Residential land value per sq m*	Land value per parking space, if sold for development**	Residents parking permit p.a. (min-max costs)***
Barnet	£2,490	£28,684	£15- £192
Camden	£4,570	£52,646	£36 - £468
Enfield	£3,020	£34,790	£27.50 - £330
Hackney	£3,585	£41,299	£10 - 264
Hounslow	£1,180	£13,593	£0 - £130
Waltham Forest	£1,460	£16,819	£25 - £140
Westminster	£11,330	£130,521	£0 - £155

Sources: \*May 2017 Values from MHCLG (2018), Land Value Estimates for Policy Appraisal; \*\*Centre for London calculation based on average parking space size of 2.4m x 4.8m from British Parking Association (2016), Parking Know How – Bay Size; \*\*\*Permit pricelists from borough websites, Financial Year 2019/20.

**Table 2: Comparison of residential parking permit costs with parking space rental value**

	Annual resident permit cost average (min.)	Annual resident permit cost average (max.)	Yearly average on JustPark
Inner London (except City of London)	£51	£230	£2,740
Outer London	£29	£154	£1,587

Source: Centre for London calculations of permit prices across all London local authorities, and rental prices across all London local authorities from justpark.com.

equivalent parking spaces rented through JustPark are at least 10 times higher than prices charged by local authorities suggests that residential parking permits are being priced a great deal lower than they would be on the open market.

### **Boroughs' reported expenditure on parking does not cover costs**

Another way of considering the pricing of residential parking permits is to ask whether they are sufficient to cover costs.

To obtain the relevant data to answer this question, we examined borough parking accounts, which report individual boroughs' revenue from parking and associated expenditure (Figure 5). According to the Ministry of Housing, Communities and Local Government (MHCLG), London boroughs collectively made an average annual surplus of £376 million between 2014/15-2018/19. People often perceive this as "profit", but the Traffic Management Act ringfences the use of parking surplus for transport services. In practice, boroughs use it to support road maintenance and provisions for disadvantaged groups, such as Freedom Passes for pensioners and specialist transport for disabled residents or children with special educational needs.

Furthermore, not all costs associated with parking provision are accounted for within the reported parking expenditure figures, which only include costs associated with enforcement. They do not include other costs involved in designating and operating Controlled Parking Zones (CPZs), such as road maintenance or back office staff. These are all recorded on different lines in revenue outturn accounts, and there is no dedicated proportion relating to parking.

According to MCHLG revenue expenditure data, these additional costs come to an extra £133 million per annum (averaged for the last five years) and, when taken into account, reduce the boroughs' parking surplus to £243 million. If we replace each borough's reported parking expenditure with our calculations, inclusive of additional parking-related costs (see Appendix 2 for the detailed borough breakdown) and compare them to parking revenues, we see that surplus diminishes significantly or becomes a loss for some boroughs (see Figure 5).

### Borough parking space operation costs outstrip resident permit revenues

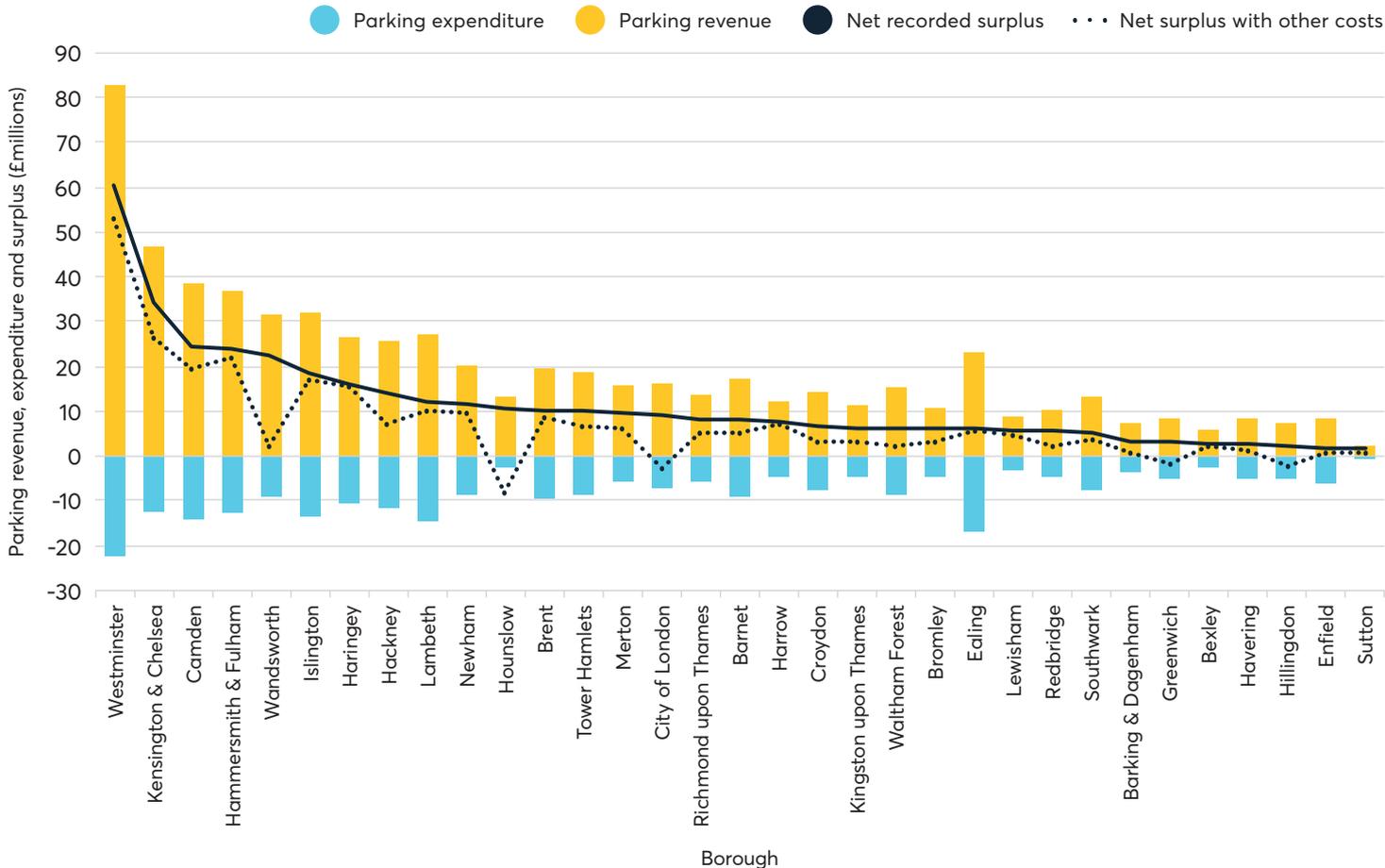
To answer the question of whether residents pay a fair price for parking provision, Table 3 below compares the average total operating costs per parking space for inner and outer London boroughs to the cost of annual resident permits. This shows that the costs of operating a parking space in both inner and outer London are not covered even by the most expensive permit costs when averaged and few residents will in fact be paying the highest levels.

**Table 3: Comparison of residential parking permit costs with estimated average operating cost per space**

	Annual resident permit cost average (min.)	Annual resident permit cost average (max.)	Estimated yearly average operating cost per parking space
Inner London (except City of London)	£51	£230	£336
Outer London	£29	£154	£295

Source: Centre for London calculations. Resident permit costs are calculated using permit prices from borough websites. Yearly operating costs per parking space are calculated by dividing the estimated total operational spend on parking in each borough (calculated using methodology outlined for Figure 5) by an estimation of the number of parking spaces within Controlled Parking Zones in each borough (using AppyWay data). This was then averaged for inner and outer London. See Appendix 2 for borough-level breakdowns.

Figure 5: Parking revenue, expenditure and surplus (£millions) by borough, five-year average figures, 2014/15 - 2018/19



Source: MHCLG RO2 Revenue Account Outturn, Highways and Transport Services: five-year averages (2014/15-2018/19). Additional expenditure was calculated by adding road maintenance and administrative costs (in proportion to the percentage of kerb space covered by Controlled Parking Zones) to the direct costs reported. See Appendix 2 for detailed methodology. Different approaches to individual borough reporting practices may account for differences between MHCLG reported figures and internally reported figures.

It is important to clarify that these estimated costs per parking space are likely to be conservative, as the number of parking spaces may include free (e.g. disabled) bays and other kerbside uses.

Given that revenues from resident permits do not cover boroughs' costs, the source of borough parking surpluses is largely short-stay parking and enforcement income. While the annual returns of borough accounts submitted to MHCLG do not provide a breakdown for the different components of parking revenue, some boroughs do publish these in their annual parking reports, and Table 4 gives the detailed breakdown for a number of boroughs that we have information for. Income from resident permits accounts for a small proportion of boroughs' parking revenue, with the majority made up of short stay (pay and display) charges and enforcement charges.

This means that, in practice, charges to visitors and other non-resident drivers are cross subsidising the provision of resident parking as well as other transport services for residents. Given the value of kerbside space as a public good, resident parking provision should at least cover its own cost – and this would enable surplus income from short-stay parking and enforcement to be spent on modal shift and public realm improvements.

**Table 4: Detailed parking account breakdowns for selected boroughs, five-year average figures (2014/15-2018/19)**

£, 000s	Camden	Hackney	Westminster	Enfield	Croydon
<b>Income from resident and other permits</b>	7,312 (19% of income)	5,775 (29% of income)	6,163 (7%)	505 (7%)	1,270 (9%)
<b>Income from short-stay (pay and display) parking</b>	11,511 (31%)	5,966 (30%)	41,393 (50%)	1,830 (24%)	4,437 (31%)
<b>Enforcement income</b>	14,287 (38%)	7,042 (35%)	17,080 (21%)	5,284 (69%)	8,290 (57%)
<b>Total income</b>	<b>37,526</b>	<b>19,902</b>	<b>83,060</b>	<b>7,619</b>	<b>14,463</b>
<b>Reported expenditure (enforcement)</b>	<b>12,749</b>	<b>11,275</b>	<b>20,447</b>	<b>5,619</b>	<b>8,000</b>
<b>Reported surplus</b>	<b>24,778</b>	<b>9,706</b>	<b>62,613</b>	<b>2,000</b>	<b>6,463</b>
<b>How surplus is used</b>	53% concessions, 38% road maintenance, 9% home-to-school transport	60% concessionary fares, 21% school transport, 19% road maintenance	69% road maintenance and street environment, 22% concessionary fares and home-to-school transport, 9% other (transport planning and strategy, street management)	100% concessionary fares	Additional parking facilities, public transport, road maintenance, and environmental improvements

Source: Individual borough parking account reports. Calculated expenditure is from Centre for London calculations (see Appendix 2). Total revenue includes other related income not included in the rows above, such as income from parking suspensions, car clubs, and commercial income.



**3.**

**The value of  
alternative uses  
of kerb space**

Streets are public spaces though their design often prioritises motor vehicles on the carriageway and parking for motor vehicles on the kerbside. However, 44 per cent of Londoners do not own a car, and the capital's streets are not only conduits of traffic but also places where people of all ages socialise, play, exercise, shop and rest. Street design should cater for these needs too. In view of these concerns, we now consider what value Londoners place on other street uses, and how the priorities of car owners and non-car owners compare.

Our survey results (see Figure 6) show that overall, on-street parking for residents is the fifth-highest priority for street use. 43 per cent of all Londoners believe it should be high priority: yet only 31 per cent of non-car owners agree, compared to 52 per cent of car owners.

Overall, Londoners prioritise uses that improve quality of life and support pedestrians, such as trees and green space, pavements free of clutter, children's play space, and community or recreation space.

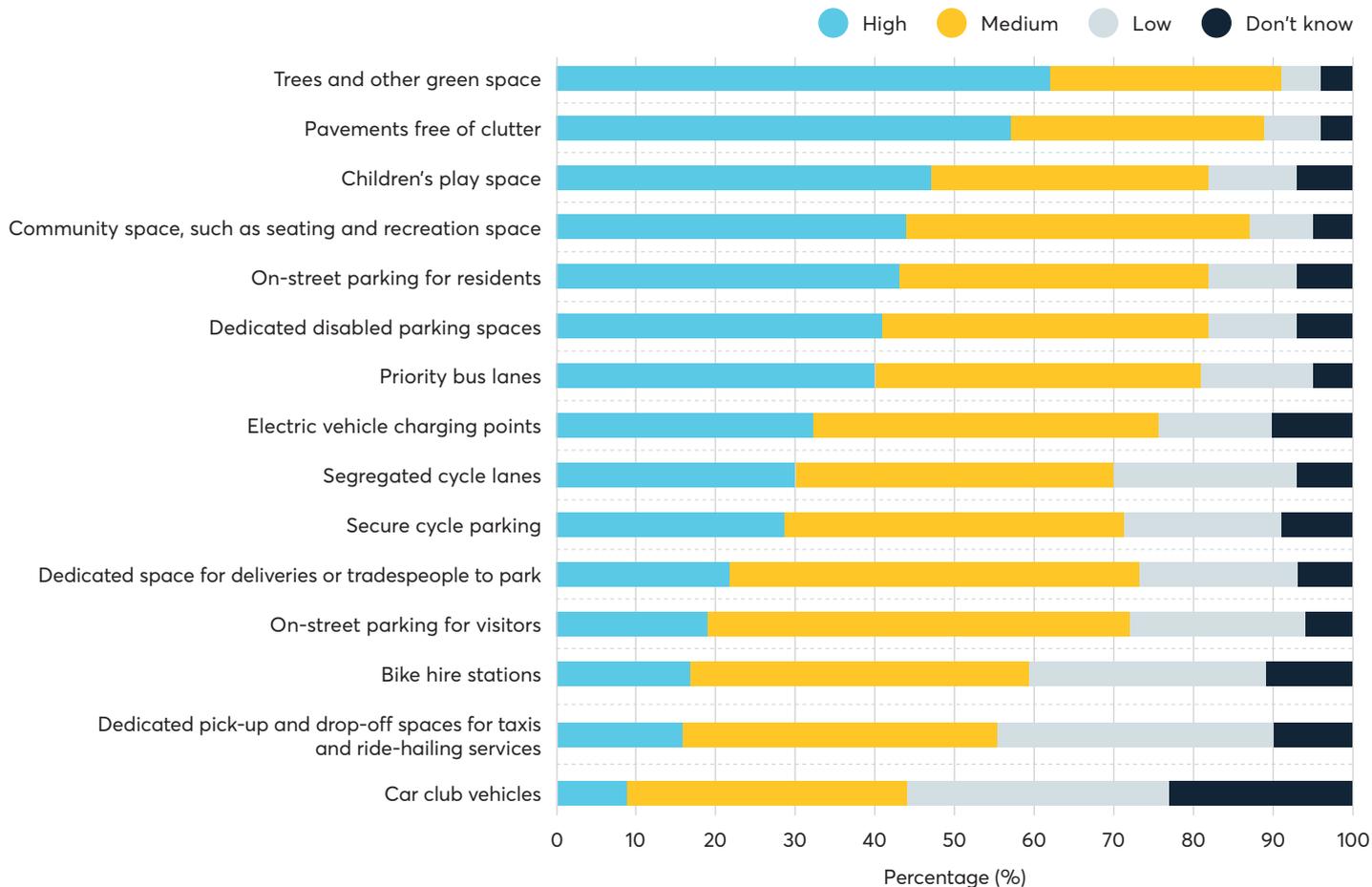
The rest of this chapter examines these alternative kerbside uses and Londoners' preferences in more detail.

### **Bus lanes and bus stops**

The bus is the most popular form of public transport in London, and one-fifth of all journey stages in London are made by bus.<sup>24</sup> Buses are more easily accessible than both trains and the Underground, so many people – especially older and disabled Londoners, parents of young children, and others with limited mobility – rely on buses every day. Yet, bus speeds have been declining – from 9.6 mph in 2013/14 to 9.3 mph in 2018/19 – due to increasing congestion, particularly in central London. The same is true of bus ridership, which declined by eight per cent between 2014 and 2018.<sup>25</sup>

A fully utilised bus is among the most efficient ways to move people and has a key role in the shift towards sustainable transport across the city. To fulfil this potential, TfL plans to rationalise routes in central London and increase routes in outer London where they are currently less dense.<sup>26</sup> More priority bus lanes can help improve bus speeds in areas of high congestion, and could start increasing passenger numbers again. There is

**Figure 6: Priority Londoners ascribe to different street space uses in their local area**



Source: Savanta ComRes survey of 1,005 adult London residents for Centre for London.

significant support for the latter measure: 40 per cent of Londoners (30 per cent of car owners, 52 per cent of non-car owners) in our survey thought priority bus lanes should receive high priority in street space allocation.

### **Cycle lanes and cycle parking**

Investment in the cycleways network has enhanced the uptake of cycling. Since 2015 the number of cycling journeys has increased by eight per cent, with 745,000 journeys made daily. In 2018, cyclists travelled over four million kilometres each day, up by four per cent on the previous year. This is the largest annual increase in London cycling to date, suggesting that people are cycling further.<sup>27</sup>

However, cycling is more popular with certain groups, and women and ethnic minorities remain underrepresented among cyclists. Despite long-term declines in cyclist road casualties in London,<sup>28</sup> personal safety remains a concern for many, with 30 per cent of Londoners citing it as a barrier to taking up or increasing cycling.<sup>29</sup> In addition, many disabled people could use adapted bikes as mobility aides, but cycle lanes are often not designed with the needs of disabled cyclists in mind.<sup>30</sup> Continued investment in high-quality cycling infrastructure, segregated from motor vehicle traffic, is an important way to get more people cycling.

Insufficient provision of safe bicycle parking is another factor affecting cycling uptake.<sup>31</sup> Over three million people own at least one bicycle in London, but only around 145,500 on-street parking spaces are available. Therefore, many people store their bikes in spaces not specifically designated for this purpose, such as balconies and buildings' communal areas. Secure bike parking, even when it is available, does not come cheap. While many boroughs are in the process of installing bike hangars, residents face long waiting lists for a space and costs of £30-40 per year.

To meet the need for cycle parking in central and inner London, and enable cycling growth in outer London, more parking space is needed – as is highlighted in the Mayor's Cycle Parking Implementation Plan.<sup>32</sup> Sufficient provision

for cargo and adapted bikes – which can enable disabled people, tradespeople or parents with children to travel by bike – is also required. But while TfL can take the lead on the network of major roads it controls and specify provision for new developments through the London Plan, it is up to boroughs to take the lead in allocating sufficient bike parking space on local roads.

While cycle lanes and parking rank relatively low in our survey's list of priorities, this is not surprising, given the relatively low proportion of people who currently cycle. Nevertheless, 30 per cent of Londoners (26 per cent of car owners and 34 per cent of non-car owners) thought segregated cycle lanes should receive high priority for street space allocation in their local area, and 29 per cent (27 per cent of car owners and 31 per cent of non-car owners) thought the same about secure cycle parking.

### **Bike hire stations**

TfL's cycle hire scheme (Santander Cycles) has increased its usership from two million in 2010 to nine million in 2019, with over 750 docking stations and 21,000 docking points located across the capital.<sup>33</sup> There is also a plethora of private bike hire service providers, from Lime to Mobike and Jump: at last count, these companies were providing around 7,250 dockless bikes for use. Bike hire can be a convenient option for people who would like to start cycling but are unsure whether to invest in their own bike, or have nowhere to store it. It can also be a first-and last-mile solution for people who mainly use public transport. Equally, the growing provision of shared e-bikes has the potential to unlock cycling for people who face physical challenges (such as older people or those unused to high activity levels); they can also make longer and hilly terrain journeys possible by bike.<sup>34</sup>

However, parking for shared bikes can be an issue, especially with dockless bikes. Where there are no designated parking bays, users may leave them on pavements, presenting an obstruction to pedestrians. They are a particular hazard for disabled people and those with visual impairments. Having dedicated and

well-signposted dockless bike parking areas in visible locations can counter this problem and boost take-up. Some boroughs are already including provisions in their agreements with operators to minimise clutter and hazard by allocating “virtual bays” in safe locations or on the carriageway to maintain footway space. London Councils is also working with boroughs on a pan-London by-law to make it easier to designate on-carriageway bays for bike parking and to enforce compliance.

### **Electric vehicle charging points**

Using electric vehicles (EVs) for journeys that cannot be made by other modes can help alleviate London’s emissions and air quality problem – although even fully electric vehicles generate emissions from production, charging and disposal, as well as particulate matter pollution from tyre, brake and road wear. To help support a large-scale shift towards electric vehicles, extensive coverage of charging infrastructure would be required. There are currently more than 28,000 electric vehicles in London, including 1,700 electric taxis and a growing electric bus fleet; current policy means that the uptake of EVs is only likely to increase.<sup>35</sup>

Increasing the availability and geographical coverage of charging infrastructure would support a widespread switch to EVs. It is estimated that by 2025 the city will require between 2,300 and 4,100 rapid charge points, and between 33,700 and 47,500 slow to fast charge points.<sup>36</sup> While there will be demand for on-street provision, especially in areas without private driveways for home charging, infrastructure should be integrated with existing street furniture as much as possible – for example via lampposts or in dedicated “mobility hubs”.<sup>37</sup>

There was a high level of support for EV charging infrastructure in our survey. Overall, 32 per cent of Londoners thought EV charging points should receive high priority for street space allocation. Notably, levels of support did not significantly vary by car ownership status or location in inner/outer London. Moreover, 47 per cent of Londoners say they would definitely

buy an electric car as their next vehicle if there were a guaranteed charging space close to their home.

### Car club parking

Again, while encouraging sustainable transport is the ultimate goal, car clubs can be a useful way of reducing overall car usage and ownership. They can serve as a transition between car ownership and a completely car-free lifestyle, providing members with access to a car for the occasional trips that require it. Car clubs have steadily grown in popularity: between 2014 and 2018 the number of memberships almost doubled, reaching 245,000 in London. More recent estimates put memberships at close to 500,000,<sup>38</sup> although these are still concentrated in inner London where both car ownership and usage are lower. 41 per cent of car club members in London report they would have bought a car had they not joined a car club, and around one in six members have sold a private vehicle after joining one.<sup>39</sup> As the vehicles are shared, one car club vehicle can replace several private cars, improving utilisation and freeing up road space. Car club vehicles are also fully compliant with the Ultra Low Emission Zone (ULEZ) and there is a growing fleet of purely electric vehicles.

Car club vehicles ranked bottom in our survey's list of priorities, as they remain a minority choice. Only seven per cent of the Londoners we surveyed currently use a car club, car rental or car-sharing platform, and just nine per cent of Londoners (the same for car owners and non-car owners) thought car club vehicles should be a high priority in street space allocation. Nevertheless, 20 per cent of car owners (29 per cent in inner London and 17 per cent in outer London) agree that they rarely use their car, and have considered or would be willing to consider alternatives such as joining a car club.

### Pick-up and drop-off for deliveries, taxis and ride-hailing services

Access to the kerbside is also important to commercial drivers, such as those working in freight, logistics, delivery and servicing sectors, as well as tradespeople, taxis and private hire drivers. We need to minimise non-essential journeys, such as half-full vans fulfilling same-day delivery deadlines, or taxis taking passengers on journeys that can easily be walked or made by public transport. Yet, fixing boilers, delivering healthcare in the community, supplying shops and supporting online services all enable our businesses and homes to run smoothly – and many disabled people or others with limited mobility rely on taxis and private hire vehicles for essential journeys.

Currently, the vast majority of deliveries and passenger pick-up/drop-offs take place on double and single yellow lines, where regulations on waiting times differ by borough.<sup>40</sup> There are a limited number of designated loading bays available, but the tight limits on their hours of operation and loading wait times can mean that freight and logistics operators need to deploy more vehicles in order to carry out deliveries within their narrow time frames. Servicing businesses, on the other hand, rely on their hosts having visitor permits (or scratch cards) – or they will need to pay and display, which can be costly. While taxis benefit from designated taxi ranks in many locations (specifically around stations and other landmarks), private hire vehicles can only stop at yellow lines; when there is no space at the kerb in busy locations, they may need to drop off passengers on the highway, which is not safe. As yellow lines are the main location for loading and passenger pick-up or drop-off, the needs of the freight industry and passenger services need to be considered when kerb designation is reviewed.

On-street parking for deliveries/visitors and pick-up/drop-off bays for taxis and private hire vehicles both ranked relatively low in our survey's list of priorities (see Figure 6). This was perhaps because respondents may consider priorities from their own perspective as a driver or pedestrian, not from that of someone driving to deliver goods and services that they may use.

### **Green and recreational space**

With streets fulfilling ‘place’ functions as well as movement, people’s willingness and ability to spend time outdoors in their neighbourhood is influenced by the availability of green and recreational space, including trees, seating and resting places, community space and children’s play areas. Sufficient provision improves social cohesion, quality of life and combats loneliness. Green space is also very important for environmental purposes, enabling water drainage, cleaning the air and cooling streets down. There has been a growing “streets for people” movement, and kerb space reallocation provides an opportunity to increase green and recreational space locally with minimal disruption.

Our survey showed a growing public concern about environmental issues. 83 per cent of Londoners are very or fairly concerned about global climate change and 77 per cent are concerned about local air quality. On climate change, levels of concern are similar for car owners and non-car owners, and for residents in inner and outer London. Moreover, 54 per cent of Londoners (58 per cent of car owners and 47 per cent of non-car owners) are concerned about road danger near their home, and 49 per cent believe children cannot safely play, walk or cycle on the streets in their neighbourhood. Consequently, green, community, recreational and play spaces were by far the biggest priority for survey respondents (see Figure 6). Again, support is almost universal among different types of Londoners.

### **Parking space**

Despite a growing focus on the environment and air pollution, many Londoners remain attached to their cars and parking provision, with 58 per cent of car owners expressing concern about insufficient parking space near their home. In addition, 69 per cent state they would not move to a new home without parking provision, even if it had good access to public transport.

As London grows, and technologies and lifestyles change, kerbside space can be used for an increasingly

wide range of functions. In many cases, however, it is impossible to accommodate all these uses without making some difficult choices. A more active approach to parking control - and to enabling residents and visitors to get around without needing their own car - will allow street space to be rebalanced over time.



**4.**

# **Current policy context**

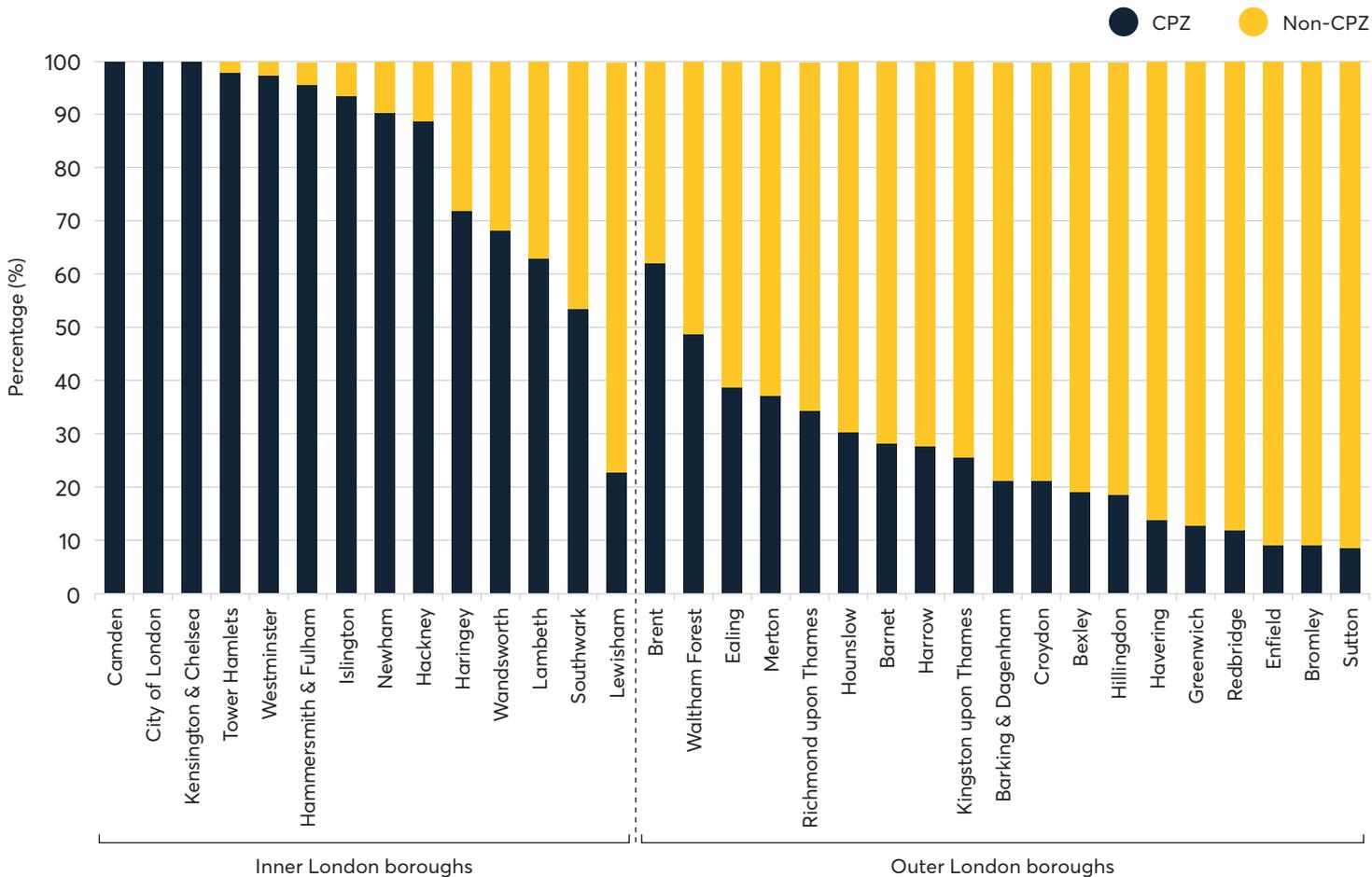
Within London, parking and kerbside management are largely within the remit of local authorities. There are also around 600 free parking spaces along the Transport for London Road Network, with some trials to introduce parking charges.<sup>41</sup> However, the vast majority of parking and waiting, including loading and deliveries for commercial use, is managed and enforced by local authorities. There are some instances of collaboration and joined-up approaches to kerbside management in the city through bodies such as London Councils and the London Technical Advisers Group (LoTAG).<sup>42</sup> Yet the different characteristics of boroughs mean that their approaches to parking often diverge.

This chapter builds on our interviews with borough parking policy leads to examine some ways in which policies differ and are changing.

### **Inner London boroughs are more likely to control parking**

Boroughs' approaches are broadly reflective of their different geographies and densities. Typically, inner London boroughs have higher housing densities and a lower proportion of housing with dedicated driveways or other off-street parking. As Figure 4 showed, two-thirds of vehicles are parked on-street in inner London, compared to one-third in outer London. This means that inner London boroughs are more likely to use Controlled Parking Zones (CPZs) to designate and manage on-street parking space. Overall, more than three-quarters (77 per cent) of kerb space in inner London is controlled, compared to less than a quarter (24 per cent) in outer London. Only a handful of individual boroughs diverge from this pattern – for example, only 23 per cent of the inner London Borough of Lewisham's kerb space is controlled, compared to 63 per cent in the outer London Borough of Brent (see Figure 7).

Figure 7: Proportion of kerb space covered by Controlled Parking Zones, by borough



Source: AppyWay calculations for Centre for London.

### **Parking policy as a tool for achieving wider objectives**

Historically, boroughs have treated parking provision simply as an amenity for residents; something that the borough has a duty to deliver, like refuse collection, rather than a policy tool to shape places in a broader sense. This has resulted in a traditional organisational split between parking management and /or enforcement teams and wider transport strategy teams.

This is changing. Boroughs have a statutory duty to show that parking controls are proportionate to meeting their stated policy objectives, rather than generating surplus. They also have an obligation to produce local transport strategies demonstrating how they will deliver the strategic objectives of the Mayor's Transport Strategy, including mode shift targets, Healthy Streets (the Mayor's approach to designing safe and attractive streets that enable more active travel and public transport),<sup>43</sup> and carbon reduction targets. Approximately two-thirds of the boroughs we interviewed (both inner and outer London) now see parking policy as a tool for managing car ownership and usage and supporting the delivery of healthy, quality public places. Reflecting this shift in priorities, several boroughs explained how their departments had restructured to better integrate parking enforcement and strategic transport planning, rather than continuing with traditional siloed service arrangements.

### **Case study: Camden Transport Strategy**

The most recent Camden Transport Strategy (2019-2041) is an example of how boroughs are embedding parking and kerbside policy as central to their wider transport strategies. The strategy recognises the kerb as a scarce public asset, as well as the role that parking policy can play as an enabler of car ownership and usage and as a barrier to walking and cycling. As such, the strategy commits to a reallocation of kerb space away from parking and to parking policies that are explicitly targeted at mode shift and management of demand.<sup>44</sup>

However, changes in parking and wider transport policy are not only coming in response to mayoral transport objectives. Many boroughs are also leading with positive action to address climate change concerns and create a better quality of life for their growing

populations. 23 London boroughs have now declared a climate emergency,<sup>45</sup> and a significant majority of the boroughs we interviewed described population growth in their area (and the subsequent need to shift towards sustainable transport) as a driver behind parking and transport policy.

- More than half of all boroughs have introduced graduated emissions-based or engine size-based residential parking permit charging structures, and some have also adopted an additional diesel surcharge to encourage cleaner vehicles. A number of boroughs are currently consulting on (or considering introducing) emissions-based charging.
- Boroughs are increasing the proportion of roads covered by CPZs. While half the boroughs we spoke to will only implement a CPZ if residents request one, the other half are taking a proactive, strategic approach and expanding CPZs to deal with displacement pressures. Some are also reviewing previous zones and dividing them into smaller areas to reduce intra-borough trips.

Other wider transport interventions introduced by some boroughs include:

- **Liveable Neighbourhoods** (and similar schemes such as Mini-Hollands, Low Traffic Neighbourhoods and Low Emission Neighbourhoods). These usually involve road and public realm improvements, traffic restrictions, new cycling infrastructure and parking, improved crossings and junctions, greening and the redesign of street and town centre areas. Evaluation of the Mini Holland scheme in Waltham Forest, for example, has shown a significant increase in active travel locally as well as reduction in noise, speed and traffic volumes across targeted areas.<sup>46</sup>

- **School Streets.** These involve closing some roads around schools to vehicles during school drop-off and pick-up times (to improve safety and incentivise walking or cycling).
- **Play Streets.** These involve temporary road closures to traffic (usually for several hours on a specific day) to allow children to play safely.
- **Parklets.** Parking spaces are turned into public spaces with planters, seating, bike parking and charging stations to allow for social interaction and rest breaks.
- **Car free days.** These involve closing large areas to motor vehicle traffic for the day.
- **Sustainable deliveries.** Supporting local businesses to switch to cargo bike deliveries.
- **Mass tree planting initiatives.**

However, despite a growing ambition to shift towards sustainable transport from even the historically more car-friendly boroughs, interviewees frequently expressed the view that public opinion might differ from that of local authority policy teams. This perception can frustrate attempts to act more strategically with parking controls, given that elected politicians are understandably mindful of their re-election prospects.

One issue is that when boroughs consult on a change – such as the introduction of a CPZ – car owners in the area may see it as a negative measure, as it asks them to apply and pay for permits to use a space that they have hitherto used for free. Residents may also feel that a CPZ would limit their ability to park, when in fact the opposite is true: controlled parking limits the ability of non-resident drivers (or those from nearby car-free developments) to use these spaces. These assumptions result in the consultation attracting negative responses from car-owning residents, while non-car owners

largely do not respond. In some inner London wards car ownership is as low as a quarter of all households, so a vocal minority can affect policy direction, while the silent majority's views are not reflected.



**5.**

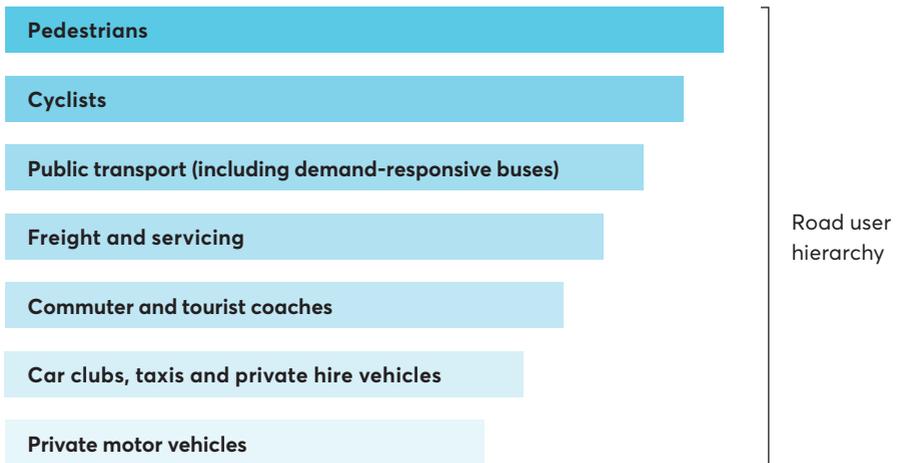
**What more can  
be done?**

Many London boroughs are now proactively using parking and kerbside interventions to achieve wider transport policy objectives. But different boroughs are at different stages of this journey. This chapter presents a mixture of interventions that boroughs can use to encourage their residents to think differently about car ownership and use, and to create better streets.

### **Kerb space allocation**

Reviewing kerb space allocation in its entirety is essential to making well-evidenced policy decisions. Centre for London's 2017 *Street Smarts* report recommended that all boroughs should develop kerbside strategies that allocate road and kerb space in accordance with clear user hierarchies.<sup>47</sup> While the principle of road user hierarchies is relatively well-established as a tool to manage movement, equivalent kerb space hierarchies can help guide the allocation of parking and drop-off space, as well as other social uses for different types of streets (see Figure 8 for example hierarchies).

**Figure 8: Example road user and kerbside hierarchies**



**Safety and access**  
(e.g., pedestrian crossings, dropped kerbs, double yellow lines)

**Public transport access** (e.g., bus stops)

**Parking for disabled users**

**Cycle lanes, bike hire stations and cycle parking**

**Green, recreational and community space**

**Car clubs**

**EV charging**

**Residential and some short-stay (visitor) parking**

Residential  
kerbside  
hierarchy

**Safety and access**

**Public transport access** (e.g., bus stops)

**Parking for disabled users**

**Green, recreational and community space**

**Cycle lanes, bike hire stations and cycle parking**

**Deliveries, pick-up and drop-off**  
(incl. single yellow lines)

**Car clubs and EV charging**

**Residential and some short-stay (visitor) parking**

High-street  
kerbside  
hierarchy

A kerbside strategy (as a standalone document or part of a wider strategy) can link parking management and transport policy together as well as balancing competing uses of the kerb, such as different transport modes, the parking of different vehicle types and other uses that benefit local residents and businesses. Southwark was the first (and so far, only) borough to publish a kerbside strategy,<sup>48</sup> but this was absorbed into a more comprehensive Movement Plan that includes provisions for parking management and kerbside space reallocation.<sup>49</sup>

Boroughs' kerbside strategies should include a commitment to reallocate a certain percentage of parking space (even if it is as little as one to three per cent) every year to other high-priority uses, such as cycleways, EV charging, disabled bays, or green space. To help demonstrate the benefits, this could start with a small trial; some temporary alternatives (such as parklets) can also be implemented quickly so that residents can see the benefits before more permanent measures are installed. When reviewing where parking should be located, boroughs should take off-street provision into account and cluster on-street provision together, with clear signage to prevent people driving in search for a scant number of scattered bays. Requiring residents to walk a short distance to their car could also help reduce usage.

### **Case study: Copenhagen**

Copenhagen has been gradually rebalancing priorities for its city centre streets over several decades. The initial pedestrianisation of certain streets was met with opposition at first, but the transformation has proven to be extremely popular since being implemented. The city authority has adopted an integrated traffic management strategy for the city centre, reducing the number of parking spaces by a fixed percentage every year and increasing charges for on-street parking. It has also reallocated road space on several main routes into the city for bus and cycle lanes, restricted through-traffic, and invested in the suburban train, bus and bicycle networks. In the city centre, 80 per cent of all journeys are now made on foot and 14 per cent are made by bicycle.<sup>50</sup>

The Mayor of London currently has a limited role in forming parking policy apart from setting maximum parking standards for new developments through the London Plan. However, the Mayor produces a Transport Strategy, and boroughs are required to produce Local Implementation Plans (LIPs) that demonstrate how they will achieve the objectives of the Mayor's strategy at the local level. The Mayor could support the boroughs by developing model kerbside hierarchies and guidance, but could also require boroughs to produce kerbside strategies as part of their Local Implementation Plans.

**Recommendation 1:** London boroughs should develop kerbside strategies that allocate road and kerb space in accordance with clear user and kerb space hierarchies. They should also commit to reallocating a certain percentage of kerb space to higher priority uses. The Mayor should support boroughs with guidance to include kerbside strategies in their Local Implementation Plans.

### Parking availability

Controlled Parking Zones are the tool that boroughs use to manage competing demands for kerb space, as well as on-street parking from residents and visitors. They are mainly deployed in the areas most affected by parking pressures, such as those around town centres, railway stations or car-free developments. The specific restrictions are designed according to the area's needs. CPZs are implemented through Traffic Regulation Orders (TROs) following public consultations, and can be paid for by developers if delivered as part of a new development with limited or no parking. TROs are required to introduce space dedicated to specific uses and to introduce permits and charges for their use. Without them, boroughs cannot allocate kerb space to specific priority uses (such as disabled spaces, EV-only bays, or bike hangars).

As discussed above, the extent of CPZ coverage varies by borough, as do the procedures for initiating them. Some boroughs will only consider introducing a CPZ if explicitly requested by residents. Others will proactively identify areas that would benefit from parking controls and consult residents on their introduction and/or operating conditions. The process of implementing CPZs can be long and arduous, and it is not uncommon for residents to reject controlled parking in their street only to petition for it later when they feel the displacement effects of new parking zones implemented in neighbouring streets. Londoners seem to be split on the benefits of CPZs: our survey showed only 47 per cent of car owners would be prepared to pay for a resident parking permit to control parking by non-residents in their area.

This highlights the importance of the consultation and public engagement processes. Boroughs must make every effort to engage a diverse range of residents and be aware that consultation respondents are unlikely to be a fully representative sample. This awareness should also be reflected in decision-making. Some boroughs we spoke to felt a duty to be as “impartial” as possible in the communications sent to residents as part of the consultation process, with no explanation of the need for the proposed policies. Other boroughs have used a combination of more deliberative methods and local incentives to achieve buy-in for parking controls.

### **Case study: Newham**

In order to build local consent for parking controls and hear the views of a wider range of consultees, Newham have consulted at the early stages of the development of their renewed Parking Strategy. Using the format of a number of Citizens’ Assemblies taking place across different neighbourhoods – and specifically inviting different road user and stakeholder groups – the process was designed to provide a more accurate and representative picture of public opinion.<sup>51</sup> Similarly, in order to demonstrate the importance and public benefit of parking charges, Newham are proposing that local groups will have a say in determining how some parking revenue from their “Residential Parking Zones” will be re-invested locally in highways and environmental improvement projects.

Additional tools like hotspot maps for air pollution, congestion and road danger can help build evidence of the need for change. The Positive Parking Agenda – supported by the majority of boroughs, London Councils and the British Parking Association – is also seeking to improve public opinion by outlining the importance of parking management, improving standards and increasing consistency.<sup>52</sup>

The size and condition of CPZs can have a significant impact on car journeys in a borough. For example, Kensington and Chelsea has only one CPZ covering the entire Borough. Tower Hamlets is divided into four main CPZs, which are each subdivided into two to six “mini-zones” each with their own operating hours. Permit holders can park within their main zone for an unlimited period and for up to three hours in any other zone in the Borough. Both these examples mean that residents are permitted to make intra-borough journeys for free. In contrast, Camden is divided into 19 CPZs with different hours and days of operation, restricting permit holders to free parking in their zone only. Reducing the size of CPZs can be a powerful tool in discouraging short intra-borough trips, when these can be made by walking, cycling or public transport.

An additional tool for boroughs in which the number of permits issued significantly exceeds the number of spaces available is to limit the number of permits issued. One option is to introduce a cap on the total number of permits issued. Once this cap is reached, new applicants (with the exception of those with Blue Badge entitlement) and renewing applicants would need to join a waiting list. To reduce the impact on existing residents, they may be allowed to keep renewing existing permits, while moving new applications (including for additional vehicles of existing residents) to the waiting list. If boroughs pursue a policy of a gradual reduction in the total number of parking spaces, the cap in parking permits can be lowered over time.

Another option is to limit eligibility for new residents. Councils may stipulate that, when existing residents move away, the address will become effectively

car-free and new occupiers will need to evidence need against given criteria, rather than automatically releasing new permits for the same address. With a reasonable level of household churn, a better balance between permits issued and spaces available can be achieved. Waiting lists and limited eligibility should be accompanied by incentives to entice low-car-use households to give up their permits.

### **Case study: Brighton**

To manage local parking pressures, Brighton and Hove Council have introduced a residential parking permit waiting list for two parking zones in the city (excluding Blue Badge holders, who have automatic eligibility for a resident's permit). In total, the parking zones are allowed to provide around 3,000 permits. Permits that are no longer in use (either returned or not issued for renewal) are offered to people on a waiting list. For example, in January 2020, around 40-50 permits were offered, in comparison to 174-265 people currently in line to purchase one.<sup>53</sup>

However, there is a risk of perverse incentives for households to keep a car they rarely use just to maintain a permit that they think might be needed in the future. A cap that only applies to new residents can also be perceived as unfair. It is essential that people considering moving into the area are provided with the clear message that they may not be eligible for parking permits immediately and may need to join a waiting list.

Boroughs have a statutory duty to review their parking policies (including CPZs) on a regular basis to ensure they continue to meet their stated policy objectives. The nature of both residential areas and town centres can change over time, with new lifestyles, leisure habits and travel patterns: these can shift parking pressures to different times and areas. So it is important for boroughs to regularly review the coverage and operating hours of controlled parking.

**Recommendation 2:** London boroughs should regularly review the coverage, size and operating hours of Controlled Parking Zones, engaging a diverse range of residents in the consultation process to ensure they meet local and mayoral policy objectives. To make sure that the total number of permits available is consistent with policies to gradually reallocate road space, boroughs should introduce a cap on the number of permits issued, using waiting lists or limited eligibility for new residents.

### Parking prices

Once CPZs are introduced, pricing is the main variable that affects demand. By law, boroughs are not permitted to increase permit prices with the primary objective of generating a surplus for other transport projects – even if surplus can legitimately be spent on these projects – but prices can be set at a level that is needed to manage traffic congestion and parking demand. With reduced car usage and modal shift being central objectives of the mayoral Transport Strategy (and therefore boroughs’ Local Implementation Plans), boroughs need to ensure that permit prices and short-stay charges are set at a level that helps meet these objectives locally, as well as allocating sufficient space to uses that support sustainable transport.

Residential permit prices should be set at a level that (at minimum) covers the full cost of administration, enforcement and a reasonable proportion of maintenance costs (as discussed in Chapter 2). This would mean that any surplus generated from short-stay parking or enforcement does not cross-subsidise residents’ parking, but allows boroughs to invest in local sustainable transport, low-traffic neighbourhood schemes, and public realm improvements such as green and community spaces. To ensure transparency, all boroughs should report the costs and revenues from resident and other permits separately from short-stay parking.

In addition, all boroughs should move to a staggered emission-based charging structure to incentivise take-up of cleaner vehicles. As the ULEZ expands and the government's deadline for phasing out petrol and diesel vehicles approaches, boroughs may also wish to ban residents from applying for permits for the most polluting vehicles. Boroughs should also ensure that the number of vehicles per household is limited through escalating charges.

London Councils should also encourage boroughs towards greater harmonisation on whether the different pricing brackets should be based on emission standards, engine type and size or real-world tested emissions for each model – as well as the range of each bracket. This would give Londoners moving between boroughs certainty when deciding on a vehicle purchase.

**Recommendation 3:** London boroughs should set residential parking permit charges at a level that helps achieve strategic modal shift objectives and fully covers the total operating costs of residential parking. All boroughs should move towards a harmonised emission-based charging structure, alongside escalating charges for additional vehicles.

### High street and workplace parking

In addition to controlling and pricing parking at journey origins (i.e. near people's homes), boroughs can discourage car trips by controlling and pricing parking at destinations (i.e. high streets and employment centres).

For high streets and town centres, reviewing parking allocation and pricing should be part of boroughs' kerbside strategy review. Policies should prioritise low-traffic neighbourhoods and public realm improvements to enable travel by public transport, walking and cycling. Remaining short-stay parking for private vehicles should be charged at a level that both reduces demand and achieves optimal occupancy: how technology can help to facilitate this is discussed later in the present chapter.

There is a common belief that the introduction of parking controls or reallocation of kerb space from parking will harm local economies. However, there is a significant body of evidence that town centre and high street vitality is supported by better placemaking and high quality public realm that is not dominated by cars (whether moving or stationary). The vast majority of high street retail customers arrive by walking and public transport: while pedestrians and cyclists typically spend less per trip, they make more frequent trips and therefore spend more altogether than those arriving by car.<sup>54</sup> There is compelling evidence that large-scale public realm improvements (such as creating a safe and pleasant pedestrian and cycling environment) can help support local town centres by increasing footfall and therefore profitability.<sup>55</sup> But even smaller, incremental improvements can help.

Regarding journeys to work, parking provision at workplaces is now much less common than in the recent past, particularly in central and inner London. For areas where workplace parking provision is still prevalent, the Workplace Parking Levy (WPL) is one tool available to local authorities to target it specifically. WPL is a levy charged to large employers and educational institutions on the basis of the number of parking spaces they provide to employees or students. The institution can then decide whether to pass the cost on or not.

### **Case study: Nottingham's Workplace Parking Levy**

In 2012, Nottingham City Council became the first local authority in the UK to implement a WPL. Commuters accounted for about 70 per cent of peak traffic in Nottingham, with the resulting congestion costing £160 million each year.<sup>56</sup> As of 2020, employers who provide more than 10 parking spaces must pay an annual charge of £424 per workplace parking place.<sup>57</sup> Roughly eight out of 10 companies pass this charge onto their employees.<sup>58</sup> Combined with the impact of public transport improvements paid for by the levy, traffic in Nottingham City declined by nine per cent compared to levels in 2004.<sup>59</sup> Revenue from the levy is being used to fund the redevelopment of Nottingham train station, the bus network, and the development of the Nottingham Express Transit service. The latter is currently on its second expansion and has successfully doubled the size of Nottingham's tram network.<sup>60</sup>

London boroughs already have the power to introduce WPL, and the Mayor has issued guidance to boroughs suggesting a minimum charge rate of £750 per year per parking space.<sup>61</sup> A number of mainly outer London boroughs are now considering its use (Hounslow is the most advanced, having already consulted on a scheme). Yet given the less dense public transport network in outer London, any proposals should be linked directly to investment in public transport infrastructure schemes that benefit the commuters affected and can be delivered quickly. A common concern for some boroughs is that if WPLs are implemented in relatively small geographic areas, there may be a risk of local authorities engaging in a downward spiral of competitive pricing to draw in business. However, in reality the annual WPL costs for large employers are typically a small fraction of the potential cost of relocation, and there is no evidence of this occurring.

WPL can encourage large employers to locate in areas with good public transport provision, and to work collaboratively with employees to rethink their travel plans. Facilitating more commutes by public transport, walking, cycling, and employee ridesharing will enable employers to reduce the number of parking spaces they need to provide, reduce their WPL liability, and use any freed-up space for commercial purposes. In future, the principle of WPLs could potentially be extended to other types of non-residential parking – for example, allowing boroughs to charge for retail parking spaces (although this would require an amendment to the GLA Act 1999). However, action to rein in excess workplace parking does not necessarily need to be initiated by the public sector. There are large employers who may wish to reduce their parking provision for a variety of reasons – including meeting regulatory standards (e.g. air quality), following their own environmental policies, complying with planning conditions, or simply reducing costs and freeing up land for more profitable use. Planning policy should enable this.

### Case study: Heathrow Airport

Heathrow Airport is one of the largest single-site employers in the UK, with more than 70,000 people working for the airport, different airlines, retailers and construction companies on site. In its strategy for growth, Heathrow has committed to reducing employee car trips by 25 per cent by 2030, and by 50 per cent by 2040 (when measured against a 2013 baseline). To help meet these goals, the airport launched the Way2Go campaign in 2019 to help employees change the way they travel. Way2Go offers 75 per cent off rail and bus travel, discounted bikes and equipment in its Cycle Hub, access to the Liftshare app, and dedicated car-share parking bays.<sup>62</sup> To date, this has resulted in approximately 50-100 fewer colleague trips per day at Heathrow's head office, and an estimated £1 million saved in car running costs due to sharing.

**Recommendation 4:** London boroughs with significant levels of private workplace parking should consider introducing a Workplace Parking Levy as part of a package of measures to shift travel-to-work patterns. Boroughs should review their planning policies to enable large employers to reduce private parking and facilitate modal shift among employees.

### Providing alternatives to the private car

For policies that reduce the availability and increase the costs of parking to be seen as fair and effective, they need to be supported by the provision of a range of attractive and affordable alternatives to the private car. While ultimately the goal is for most trips to be made by public transport, walking and cycling, drivers can be reluctant to give up the convenience of their car for the journeys they cannot easily make by these means, even if these are only occasional. In our survey, 44 per cent of car owners agreed with the statement “I rarely use my car, but I still need it for occasional trips”, while 51 per cent disagreed. However, only 20 per cent of car owners say they rarely use their car and have considered or would be willing to consider alternatives such as joining a car club.

Research has shown that once people own a car, they tend to use it more frequently and may perceive alternative transport modes as less convenient. In addition to “push” policies, the availability of an extensive and affordable network of car club vehicles can help persuade habitual but low-usage car owners to give up their vehicles. For many such households in London it would make clear economic sense to adopt car club membership instead of maintaining a vehicle they rarely use. Research suggests that when insurance, tax, fuel, MOT and parking costs are taken into account, Londoners who drive less than 2,000 miles a year (roughly four hours a week) would be better off using a car club than owning a car, before one even considers the cost of the vehicle itself.<sup>63</sup> Despite this, take-up of car clubs in London is still low compared to many other European cities.

### **Case study: Bremen**

Introduced in 1990, car sharing in the northwest German city of Bremen was one of many strategies to remedy increased parking demand and overall poor parking practices. The car sharing service is located at mobil.punkte (mobility hubs) on main roads around the city. Evaluation of car-sharing provision in Bremen has estimated that for every shared car, 11 private cars have been replaced, leading to 2,300 fewer private cars and preventing the purchasing of another 2,700 cars. The scheme has also stimulated a greater uptake in environmentally friendly transport alternatives.<sup>64</sup> A reported 85 per cent of residents are aware of the car-sharing opportunities provided, due in part to the scheme being embedded into the city’s travel season ticket.

Car clubs can therefore contribute to reduced car ownership and usage, driving the transition towards cleaner vehicles. However, different approaches, operating conditions and charging levels across boroughs can stifle operators. Recently, the flexible model car club Drive Now announced it was pulling out of London, citing “high costs of operation and the different circumstances in the single boroughs”<sup>65</sup> – as did electric vehicle provider Blue City.<sup>66</sup>

The ULEZ extension in October 2021 offers an opportunity to encourage more Londoners to shift away from car ownership. As part of the existing scheme, the Mayor has introduced a vehicle scrappage scheme for small businesses, disabled people and low-income Londoners, which allows the grant to be used as car club credit instead of towards the purchase of a new vehicle.<sup>67</sup> As well as extending this scheme to households within the wider area, the Mayor, TfL and the boroughs should promote the opportunity for car-owning residents to switch to ULEZ-compliant car club vehicles at a much greater scale, saving the expense of acquiring a new car.

To residents who give up their parking permits, boroughs could also offer mobility credits that can be used for car clubs as well as public transport. This would be similar to how people moving into new car-free developments can be offered car club credits in lieu of a parking space. For such measures to work, boroughs will need to ensure there is sufficient provision across London, with standardised parking and other rules for customers. London Councils are currently developing a pan-London approach to car clubs, with recent efforts aimed at better information sharing.<sup>68</sup>

Harmonising regulation to enable pick-up and drop-off of dockless hire bikes in any borough – the subject of a proposed new by-law – would also help support take-up, alongside reallocation of parking bays to bike hire stations.

**Recommendation 5:** Boroughs should ensure there is sufficient and accessible car club provision across London by allocating sufficient on-street parking spaces and charging a fair price for them. London Councils should draw up a recommended regulatory and pricing framework for car club and bike hire operation to support harmonisation across boroughs. Transport for London and the boroughs should launch a system of mobility credits that can be used on public transport and private mobility services, using these as incentives for reducing car ownership.

## Dynamic management

Parking technology is key to improving and streamlining parking provision nationally, but take-up has been slow. The need for upfront capital investment, ongoing relationships with current providers, and hesitation to commit to an uncertain future have all held up progress. While most London boroughs have moved away from cash payments in favour of payment by phone, the take-up of parking apps and automated payments is still low, though more prevalent among younger people. Steps towards standardisation are already underway – with a Department for Transport-funded initiative to develop new national and global parking data standards that support data sharing, and the development of apps to make parking easier.<sup>69</sup> There is also progression from paper Traffic Regulation Orders towards digital formats to enable faster, more efficient processes for introducing and amending TROs, but the degree of digitisation is variable among local authorities.<sup>70</sup>

Technology offers opportunities for much more efficient management of kerb space, as well as pricing that is actively responsive to real-time demand. Installing digital sensors that identify vehicles and communicate directly with the in-vehicle system would allow more precise pricing and automated charging. By signposting available spaces, this technology could reduce searching times and congestion. It can also charge drivers by the minute and take payment directly from the customer's account as the vehicle departs. This also has the potential to change an adversarial culture around parking. Rather than risking fines, drivers can park in the knowledge that they will only pay for what they use, and not feel they have been unfairly charged (as is all too common).

Technology also has the potential to create large cost savings for boroughs. Automated payment can particularly benefit home service and healthcare providers, who can spend as long with customers and patients as needed without worrying about topping up the parking meter.

### Case study: Harrogate

Using over 2,000 smart bay sensors and the AppyWay platform, the “Smart City Parking” solution launched in Harrogate in January 2019. Users of the app can see real-time availability of spaces, saving both time and miles driven looking for parking. They are also able to start pay-per-minute sessions that automatically end when they drive away. As the vast majority (87 per cent) of drivers surveyed found the solution more convenient than using pay and display machines, they stayed in the bays longer than comparable pay and display sessions – an average of 10 minutes extra for on-street and 50 minutes extra for off-street locations, resulting in increased revenues for the local authorities and more time spent by individuals on the high street. The technology has thus enabled the local authority to better manage and optimise their existing parking assets. The scheme is now expanding to cover other bay types, including the integration with EV bays. Portsmouth, Halifax and Dundee are also in the process of embedding the technology.

Digital mapping of the kerbside and sensors can also change a parking space’s designation and charging rates throughout the course of the day. For example, empty resident bays that are empty during the day can be made available for short stays and charged different rates by the minute. There are also platforms that can enable commercial vehicle operators to request an available parking space for use as a loading bay and pay for it in real time.<sup>71</sup> Even ultra-short stays, such as passenger pick-up/drop-off or loading and unloading, can be automatically charged a small fee (a micro-transaction of a few pence) for stopping at the kerbside. This can help boroughs manage demand for high-turnover space – such as that around public transport hubs or busy town centres – at low transactional costs.

The same technology could be used to enable dynamic pricing – the ability to vary prices more flexibly to balance demand and supply for on-street short-stay parking in town centres and achieve optimum occupancy levels of about 85 per cent. The aim is to reduce congestion and pollution by reducing the amount of traffic searching for a parking space, which has been estimated to make up a significant proportion of local traffic (from 15 per cent to 70 per cent dependent on time and location).<sup>72</sup>

Drivers benefit from knowing that occupancy will be maintained at a level where some spaces are available at all times, although this may mean paying a premium for popular locations at busy times of the day. More price-sensitive drivers will be directed to parking spaces further away from destinations, or can switch to visiting at less busy times of the day. The net result should be a reduction in the vehicle mileage associated with searching for parking spaces. Dynamic pricing schemes can also be broadly revenue-neutral if higher rates at peak times are balanced by cheaper rates off-peak. While the initial upfront investment would be a barrier to many boroughs, the efficiency and enforcement cost savings – as well as additional revenue from micro-transactions – could improve boroughs' overall financial position.

### **Case Study: SF Park**

With the launch of SF Park in 2011, San Francisco was one of the first cities to adopt a dynamic approach to pricing metered parking.<sup>73</sup> Charges vary by block, time of day and day of week to achieve a target occupancy rate of one to two available spaces on every road segment. Availability of parking spaces can be identified on the SF Park website or via mobile app.

Evaluation of the pilot phase indicated a 16 per cent reduction in parking non-availability, while users reported a 43 per cent reduction in parking search times. In areas where an improvement in parking availability was measured, overall traffic volume decreased by around eight per cent. The average hourly rate paid by users actually fell from \$2.69 to \$2.58 as charges in less-used blocks were adjusted downwards.<sup>74</sup>

However, there are presently some regulatory barriers to this approach. Current legislation prevents charging for short stays of under five minutes, which means automatic charging for small time increments is not possible. In addition to digitising Traffic Regulation Orders (TROs) as describe above, the government should also allow dynamic TROs. At present, every time an authority wishes to change the designation of a parking space, a new TRO is required. Dynamic TROs would allow parking spaces to be multipurpose, so that the authority can change their designation frequently without the need for a new TRO every time.

**Recommendation 6:** Boroughs should embrace the opportunities created by new technology to manage demand for kerb space – including automated charging, dynamic space designation, micro-transactions for ultra-short-stay parking, and dynamic pricing for short-stay parking. Central government should enable dynamic management by allowing for charging in small increments and introducing dynamic Traffic Regulation Orders.



# Conclusion

This report has outlined the scale of the challenge facing London. Londoners are driving less, but the city needs to take concerted action to tackle pollution, reduce congestion, create a better environment for all, and meet the Mayor's targets for reductions in private car use by 2040.

In an era of rapidly growing concern over climate change, and a widespread desire for a healthier city with better public spaces, the time is right for a step change in our approach to cars. This report has shown where the opportunities lie, and the role that parking policy can play.

As the mix of potential uses for kerbsides widens, our report has asked why car parking still takes priority at the expense of other uses that Londoners prioritise, from parklets to bus lanes. Further, it has identified some of the anomalies in how car parking is priced, with resident permits cross-subsidised by other parking revenues.

It has also shown how parking policy can help make an equitable and incremental transition to a New Urban Mobility, by allowing for essential low-emission car use, providing better alternatives, and easing the frustrations of congestion and parking that drivers face today.

We have seen examples of good practice that exist now, in London and beyond, and discussed how the potential of technological innovations can be harnessed to facilitate the transition. Building on ideas grounded in practical realities, we have also made a number of recommendations to help get us there.

What we need now is action, and for London to accelerate towards the greener, safer, healthier city that will benefit us all.



# Appendix 1

## Car ownership and usage statistics, by borough

Borough	1) Number of cars owned <sup>1</sup>	2) % of cars parked on-street <sup>2</sup>	3) Car ownership <sup>3</sup>	4) Annual vehicle kms (millions) <sup>4</sup>	5) % change annual vehicle kms, 2001-17 <sup>5</sup>	6) Sustainable mode share <sup>6</sup>	7) % change in sustainable mode share (last 3 years compared to 3 years prior, %) <sup>7</sup>	8) Sustainable mode share, 2041 target (%) <sup>8</sup>
Camden	47,781	67%	34%	447	-26%	84%	2%	93%
City of London	2,658	5%	33%	150	-26%	92%	-3%	99%
Hackney	42,841	72%	33%	459	-17%	84%	3%	91%
Hammersmith and Fulham	43,852	78%	40%	512	-15%	80%	5%	89%
Haringey	64,881	74%	43%	536	-13%	75%	2%	88%
Islington	36,727	71%	32%	393	-18%	82%	-3%	87%
Kensington and Chelsea	41,247	79%	42%	501	-14%	76%	2%	85%
Lambeth	66,943	63%	41%	745	-19%	77%	0%	85%
Lewisham	79,997	55%	53%	764	-13%	67%	-4%	81%
Newham	72,189	68%	46%	938	5%	71%	-1%	83%
Southwark	59,721	57%	43%	708	-19%	76%	-1%	87%
Tower Hamlets	46,694	50%	32%	872	-8%	80%	1%	89%

Borough	1) Number of cars owned <sup>1</sup>	2) % of cars parked on-street <sup>2</sup>	3) Car ownership <sup>3</sup>	4) Annual vehicle kms (millions) <sup>4</sup>	5) % change annual vehicle kms, 2001-17 <sup>5</sup>	6) Sustainable mode share <sup>6</sup>	7) % change in sustainable mode share (last 3 years compared to 3 years prior, %) <sup>7</sup>	8) Sustainable mode share, 2041 target (%) <sup>8</sup>
Wandsworth	82,860	67%	53%	776	-24%	69%	-2%	82%
Westminster	51,605	74%	33%	843	-18%	81%	-2%	89%
Inner	<b>739,996</b>	<b>66%</b>	<b>40%</b>	<b>8,644</b>		<b>77%</b>		<b>90%</b>
Barking and Dagenham	66,887	42%	60%	600	7%	58%	2%	72%
Barnet	147,703	32%	67%	1,679	2%	54%	4%	72%
Bexley	113,172	25%	74%	937	-4%	43%	-2%	63%
Brent	98,444	40%	50%	884	-8%	67%	5%	78%
Bromley	157,146	22%	75%	1,204	-11%	47%	1%	60%
Croydon	148,184	34%	67%	1,164	-14%	51%	-1%	63%
Ealing	122,672	49%	60%	1,249	-9%	62%	0%	76%
Enfield	127,874	39%	71%	1,645	8%	53%	3%	69%
Greenwich	80,717	46%	58%	1,077	-5%	60%	4%	75%

Borough	1) Number of cars owned <sup>1</sup>	2) % of cars parked on-street <sup>2</sup>	3) Car ownership <sup>3</sup>	4) Annual vehicle kms (millions) <sup>4</sup>	5) % change annual vehicle kms, 2001-17 <sup>5</sup>	6) Sustainable mode share <sup>6</sup>	7) % change in sustainable mode share (last 3 years compared to 3 years prior, %) <sup>7</sup>	8) Sustainable mode share, 2041 target (%) <sup>8</sup>
Harrow	104,249	25%	73%	566	-10%	51%	3%	64%
Havering	124,686	18%	75%	1,598	6%	44%	2%	65%
Hillingdon	148,038	25%	76%	2,121	-5%	42%	-1%	56%
Hounslow	101,977	37%	67%	1,490	-10%	57%	2%	71%
Kingston upon Thames	70,413	32%	74%	890	-11%	55%	5%	70%
Merton	76,811	40%	69%	571	-16%	56%	-5%	73%
Redbridge	109,539	25%	71%	1,109	5%	47%	-3%	65%
Richmond upon Thames	79,704	47%	73%	755	-16%	59%	-1%	75%
Sutton	93,815	22%	77%	626	-13%	45%	1%	63%
Waltham Forest	82,998	62%	54%	734	-5%	65%	2%	78%
Outer	2,055,029	34%	68%	20,899		53%		75%
London (Total)	2,795,025	43%	56%	29,543		63%		80%

Sources:

- 1) Number of licensed vehicles, all PLG (Private or Light Goods Vehicles), 2017, from TfL (2019), LIP3 Mayor's Transport Strategy Outcomes Borough Data Pack (September 2019).
- 2) Vehicles parked on street by borough: 5-year average 2013/14-2017/18, from TfL (2019), London Travel Demand Survey.
- 3) Proportion of households that own a car: 2015/16-2017/18 average, from TfL (2019), London Travel Demand Survey.
- 4) Annual vehicle kilometres (millions), 2017, from TfL (2019), LIP3 Mayor's Transport Strategy Outcomes Borough Data Pack (September 2019).
- 5) Ibid. Change between 2001-2017.
- 6) Walking, cycling and public transport % mode share, by borough resident, based on average daily trips, 2015/16 to 2017/18. TfL (2019), LIP3 Mayor's Transport Strategy Outcomes Borough Data Pack (September 2019).
- 7) Ibid. Change between 2012/13-2014/15 and 2015/16-2017/18.
- 8) TfL (2019), LIP3 Mayor's Transport Strategy Outcomes Borough Data Pack (September 2019); and Mayor of London (2018), Mayor's Transport Strategy.

# Appendix 2

## Extent of parking controls and comparison between parking expenditure and resident permit costs, by borough

Borough	1) Total road length (km) <sup>1</sup>	2) % in CPZ <sup>2</sup>	3) Total parking expenditure <sup>3</sup>	4) Parking expenditure per controlled space <sup>4</sup>	5) Resident permit annual costs <sup>5</sup>
Camden	336	100%	£19,016,237	£447	Emission-based, £35.94-385.57/year (+£24.80-82.90 diesel surcharge)*
City of London	56	100%	£18,855,200	-	No on-street parking
Hackney	310	89%	£17,497,616	£387	Emission-based £10-264
Hammersmith and Fulham	267	96%	£14,617,766	£170	Emission-based, £10-214 (+£50 diesel surcharge)
Haringey	390	72%	£10,792,009	£181	Emission-based, £0-119 (£497 for an additional vehicle)
Islington	273	94%	£14,706,056	£338	Emission-based, £0-610
Kensington and Chelsea	245	100%	£19,932,400	£561	Emission-based, £87-236 (+£45 diesel charge and £76 for additional vehicles)
Lambeth	468	63%	£16,032,415	£398	Emission-based, £36.59-312.59 (+ £40 diesel surcharge)
Lewisham	523	23%	£3,352,433	£150	£120
Newham	500	90%	£9,824,870	£128	£0 for first vehicle (£100 for 2nd, £200 for additional vehicles)
Southwark	456	53%	£8,470,482	£312	£125
Tower Hamlets	357	98%	£11,808,447	£413	Emission-based, £10-186 (+ 25 diesel surcharge, £50 or £150 surcharge for 2nd or 3rd vehicles)

Borough	1) Total road length (km) <sup>1</sup>	2) % in CPZ <sup>2</sup>	3) Total parking expenditure <sup>3</sup>	4) Parking expenditure per controlled space <sup>4</sup>	5) Resident permit annual costs <sup>5</sup>
Wandsworth	497	68%	£22,587,495	£210	£101-183 (£124-222 for additional vehicles)
Westminster	394	97%	£29,409,076	£668	Engine size-based, £0-155/year
<b>Inner</b>	<b>5,070</b>	<b>77%</b>	<b>£216,902,504</b>	<b>£336</b>	<b>£51-230</b>
Barking and Dagenham	374	21%	£4,273,340	£411	Emission-based, £0-140 (escalating charges for third or more vehicles)
Barnet	929	28%	£9,869,127	£354	Emission-based, £15-182.25 (+£10 diesel surcharge, £25 extra for additional vehicles)
Bexley	683	19%	£2,772,812	£302	Zone-based, £125-150 (£25 extra for additional vehicles)
Brent	594	62%	£10,420,999	£228	Emission-based, £25-241 (£50 diesel surcharge and escalating charges for additional vehicles)
Bromley	1083	9%	£4,837,732	£221	Zone-based, £50-100
Croydon	894	19%	£8,297,972	£329	Emission-or engine size-based, £6.50-300 (+£50 or £150 surcharge for second or third vehicles)
Ealing	766	39%	£17,144,413	£282	Emission-based, £30-125 (+£50 pre-2015 diesel surcharge)
Enfield	792	9%	£6,433,271	£514	Engine size-and zone-based, £27.50-330
Greenwich	596	30%	£6,485,029	£213	Emission-based, £21-289

Borough	1) Total road length (km) <sup>1</sup>	2) % in CPZ <sup>2</sup>	3) Total parking expenditure <sup>3</sup>	4) Parking expenditure per controlled space <sup>4</sup>	5) Resident permit annual costs <sup>5</sup>
Harrow	584	26%	£4,603,154	£309	Emission-based, £0-79 (escalating for additional vehicles)
Havering	804	13%	£5,492,496	No kerbside data	£35 (£60 for second and £85 for third vehicles)
Hillingdon	987	14%	£5,723,880	£314	£0 for first vehicle (£40 for additional vehicles)
Hounslow	673	28%	£7,658,823	£250	Emission-based, £0-130 (escalating for additional vehicles up to £450)
Kingston upon Thames	411	21%	£5,516,214	No kerbside data	£90
Merton	491	37%	£6,883,919	£181	Emission-based, £50-90 (+£115 diesel surcharge, escalating charges for additional vehicles)
Redbridge	624	12%	£5,131,201	£648	£20 for first vehicle (£100 for 2nd, £180 for additional vehicles)
Richmond upon Thames	504	35%	£6,666,801	£201	Zone-based, £0-114.45 (escalating charges for additional vehicles up to £229)
Sutton	506	9%	£958,342	£17	Emission-based, £40-150 (escalating charges for additional vehicles up to £200)
Waltham Forest	485	49%	£10,762,520	£244	Emission-based, £25-140 (escalating charges for additional vehicles up to £350)
<b>Outer</b>	<b>12,780</b>	<b>24%</b>	<b>£129,932,045</b>	<b>£295</b>	<b>£29-154</b>
<b>London (Total)</b>	<b>17,850</b>	<b>39%</b>	<b>£346,834,549</b>		

Sources:

- 1) AppyWay data.
- 2) AppyWay data.
- 3) Centre for London calculations using MHCLG RO2 Revenue Account Outturn and AppyWay controlled kerbside measurements. 'Total parking expenditure' = % of 'Total Expenditure' from lines 11, 31 & 32 ('Highways maintenance planning policy and strategy', 'Structural maintenance') MHCLG RO2 Revenue Account Outturn equivalent to the % of controlled parking space in each borough + 'Total Expenditure' from lines 61 & 62 ('On-street' & 'Off-street parking') MHCLG RO2 Revenue Account outturn. 5-year averages from 2013/2014 – 2018/19. Prices represent the mean of the five years of annual outturn and have not been adjusted for inflation.
- 4) Centre for London calculations using MHCLG RO2 Revenue Account Outturn and AppyWay controlled kerbside measurements. 'Parking expenditure per controlled bay' = % of 'Total Expenditure' from lines 11, 31 & 32 ('Highways maintenance planning policy and strategy', 'Structural maintenance') MHCLG RO2 Revenue Account Outturn equivalent to the % of controlled parking space in each borough + 'Total expenditure' from line 61 ('On-street parking') MHCLG RO2 Revenue Account Outturn ÷ AppyWay estimation of total no. of paid for and resident bays per borough. Different approaches to individual borough finance reporting practices may account for differences between MHCLG reported figures and internally reported figures in highways services. MHCLG RO2 Revenue Account Outturn is the only all-borough consistent dataset on highways expenditure, however. Irregular items of capital expenditure may also account for significant year-on-year variation. To account for this, 5-year averages were used instead. Borough-level figures should not be taken as a proxy for how much residential permits should cost.
- 5) Individual borough websites based on current (2019/20) resident parking permit costs.



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