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Full Report

Driving London Forward: how car clubs can help deliver the Mayor's Transport Strategy

comouk
supporting shared transport

The context

The private car is the single most dominant transport mode in London, which is now home to a record 2.7 million of them. This neither fits London's self-image nor the Mayor's Transport Strategy goal of 80% of journeys being by sustainable modes by 2041, or the even tougher goal of London being a net zero carbon city by 2030.

If you assess car clubs against Policy 23 of the Mayor's Transport Strategy, you find that they support each of its elements:

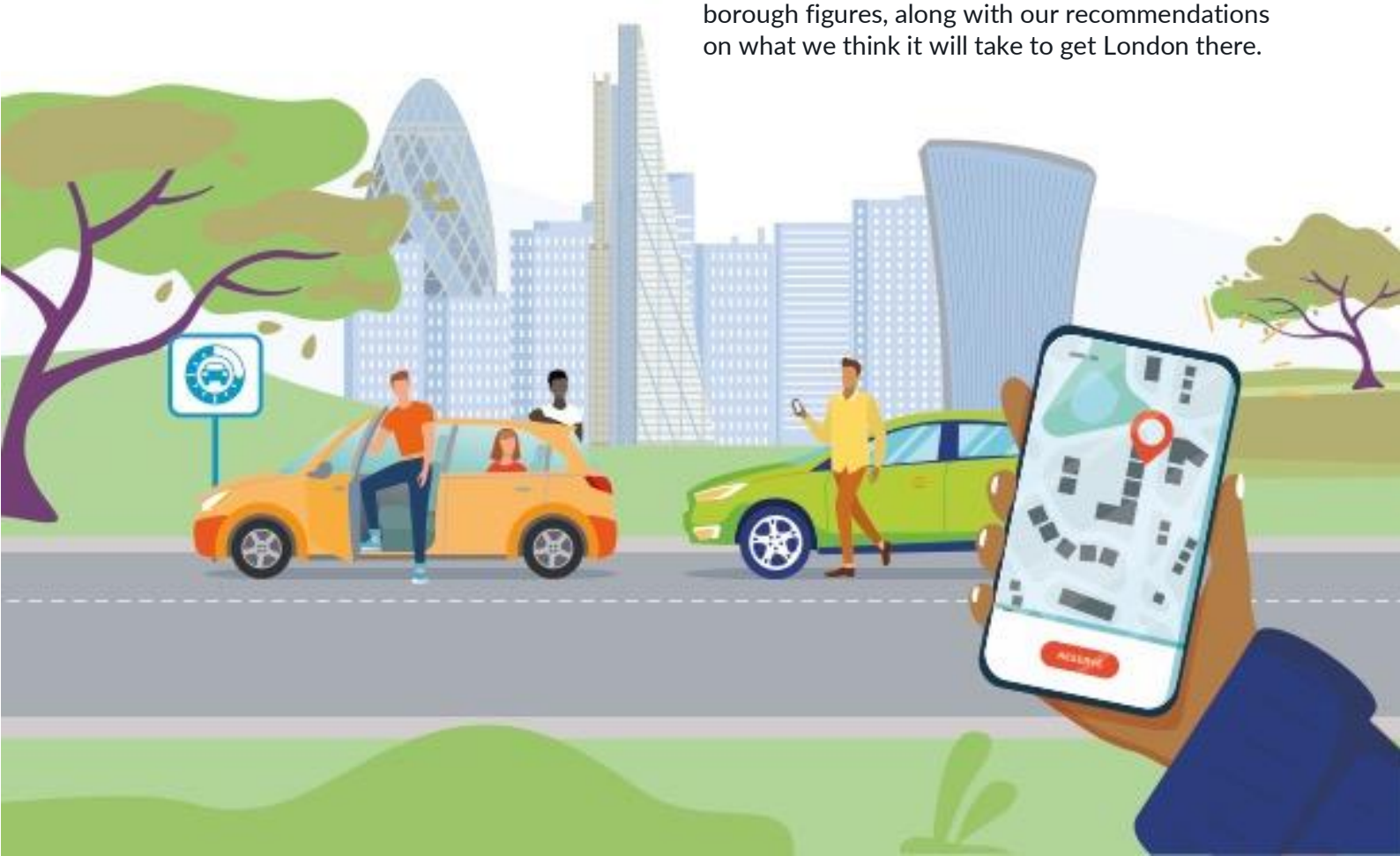
- supporting mode shift away from car travel
- complementing the public transport system
- opening travel to all
- cleaning London's air and reducing carbon emissions
- creating a safe, attractive environment on our streets
- using space efficiently
- sharing data and knowledge

Collaborative Mobility UK (CoMoUK) is the national charity for the social, economic and environmental benefits of shared transport. We have produced this report with consultants Steer to estimate the future potential of car club services in London, and the impacts these would have.

London has strong ambitions to cut its transport emissions, but faces equally strong challenges in doing so.

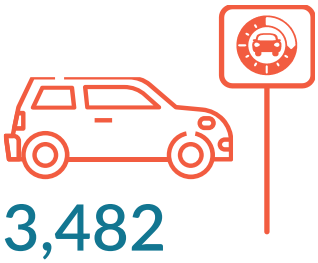
As London emerges from the buffeting of the Covid-19 pandemic in a changed world, we contend that car clubs and shared transport more broadly should be a permanent, integrated part of the policy options London takes forwards to continue to make itself a more pleasant and productive and less polluted and congested global city.

Here we publish our evidence of car club's potential in the capital, including borough by borough figures, along with our recommendations on what we think it will take to get London there.



The current position

623,910
car club members in London
up from 300,000 in March 2019

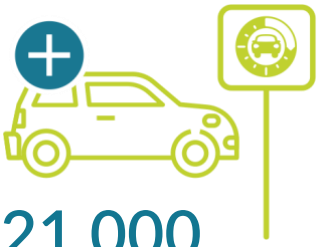


3,482
car club cars shared in London

The potential

Through our analysis of the travel habits of car-owning households in London and the identification of car-owning households where trip frequencies and characteristics are such that the households could move from private car ownership to car club use, we find:

650,000
households that could give
up a privately-owned car

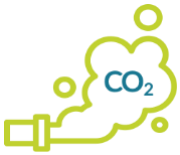


21,000
additional car club cars would
be needed to meet this demand

This would enable these benefits:

300,000
fewer privately
owned cars

194,000
ULEZ non-compliant cars
taken out of London



82,000
less tonnes of carbon
emission per year

24 MILLION
less car trips per year

340 MILLION
less car miles per year

There are 17 London boroughs which have more than 20,000 switchable households.

Our recommendations for 2022

To achieve this potential, we think a series of steps need to be taken. These are the ones we are focussing on this year, on the following page we have recommendations through to 2025.

Transport for London should:

- Promote car clubs as part of package of alternatives to the private car (whether the private car is ULEZ compliant or not);
- allocate support, including officer time;
- co-establish with London Councils and boroughs the basis of an EV charging infrastructure that suits the needs of car clubs and preferably gives them some preferential access to some of that infrastructure. This should include examining what GLA and TfL land could be used for these purposes;
- review parking policies;
- use LIP processes to collectively plan for growth in car club provision;
- open up funding from streams such as Healthy Streets and Liveable Neighbourhoods;
- Revitalise the collection and publication of car ownership levels across London, with targets to reduce these;
- Move beyond public transport accessibility levels to define Sustainable Transport Accessibility Levels (STALs). These would encompass all forms of sustainable transport – including shared transport – and give a richer insight into the options or lack of options available to Londoners and visitors alike. A goal should then be set of raising STALs over time.

London Councils should:

- Co-ordinate development of standardised procurement frameworks by London boroughs;
- Co-establish with TfL the EV charging infrastructure described above;
- Co-ordinate with car sharing operators on a centralised data collection from car club operations for the city, replacing the existing data sharing between car clubs and boroughs.

Boroughs should:

- Use car club vehicles for business borough trips;
- Actively promote car clubs as an alternative to car ownership;
- Freeze parking permit charges for car clubs for a period to reflect on the impacts of recent sharp increases;
- Offer discounts on parking permits for EV car club cars.

Car club operators undertake to:

- Increase the provision of car clubs cars in or bordering the ULEZ expansion area;
- Provide the very cleanest vehicles possible;
- Work with boroughs, BIDS and major employers to shift business trips from private cars to car club cars.

Integration with public transport and mobility hubs

Car club members have higher use of sustainable modes than national averages. CoMoUK research show that 64% of respondents were travelling by Underground at least once a week, compared to the average for people in London of 41%. 37% reported travelling by train at least once a week, compared to the average for people in London of 17% LTDS 2016/17.

Integration of modes through mobility hubs provides an opportunity for the Mayor to take this further. By working to build a network of mobility hubs that bring together shared, public and active transport options across London, London authorities can maximise the shift from private car use to more sustainable travel.

Longer-term recommendations (to 2025)

To achieve these significant improvements, we conclude that the following needs to happen by way of co-ordinated action from car club operators, Transport for London and City Hall plus and London's boroughs and London Councils.

Given the Mayoral ambition for central London and town centre zero emission zones by 2025, TfL and London Councils and London boroughs should:

- Increase funding for and implementation of electric vehicle charging infrastructure that suits the needs of car club users and operators;
- Update the Mayor's Transport Strategy to place shared transport including car clubs at the heart of all areas of Mayoral, GLA and TfL policy, in recognition of the significant role it is already playing in delivering the general aims of the existing Mayor's Transport Strategy – and the greater role it could play in the future. This should include a revised travel hierarchy that recognises the important differences between shared and non-shared cars;
- Design a package of mobility credits including shared transport options;
- Combine this with a programme of mobility hubs spread across the city. Such hubs bring public transport option(s), active travel and shared transport option(s) together.
- Explore options for a more sophisticated and coherent road pricing system for London more generally. This should recognise the role played by shared cars in reducing private car ownership and the role bike and e-scooter share can play in complementing people cycling on their own bikes. It would logically bring together the Congestion Charge Zone, Ultra Low Emission Zone, Low Emission Zone and London Lorry Control Scheme.
- The Mayor should use the new London Plan and all their planning powers including the Housing Strategy to create a definition of mobility hubs and create a network of them across the capital in the next Mayoral term. These hubs provide natural homes for EV chargepoints – some of which the Mayor should work to dedicate to shared EVs – as well as shared bikes and e-bikes, shared e-scooters and citizens' own bikes. They are a natural complement to Low Traffic Neighbourhoods and gather together alternatives to the private car while taking people to and from public transport.

Boroughs should:

- Significantly reduce or remove permit fees for car club EVs until EVs are mainstream;
- Include demand for charging from car club EVs in EV infrastructure plans.

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1 Introduction

Car clubs in London

1.1 A car club is a means of sharing a car between people, allowing individual drivers and households all the benefits of access to a car, while reducing and often removing the need for them to own and maintain their own individual vehicle. Evidence from members of car clubs in London shows a reduction in car trips, and car ownership[1]. In more details, car clubs have a long track record of delivering these benefits, which we illustrate here with specific figures from our car club annual reports.

- Displacing privately owned cars (people selling and not replacing owned cars). Our latest research finds that each car club car in London displaces 23.5 owned cars;
- Cutting net mileage (accounting for all scheme users, including those who increase their mileage) – by an average of 528 miles in 2018[2];
- Increasing use of public transport – in 2018[3], we found 64% of respondents travelling by Underground at least once a week, compared to the average for people in London of 41%. 37% reported travelling by train at least once a week, compared to the average for people in London of 17%;
- Giving access to a car at low cost – 24% of respondents who did not own a car previously tell us they could not afford to own a car and that this was their reason for joining a car club[4];
- Providing a small fleet of cars and vans that are substantially cleaner than the average UK vehicle fleet:
  - 91% lower NO_x;
  - 74% lower PM2.5;
  - 25% lower CO_2;
  - 100% ULEZ compliant (compared to 80% of vehicles in London generally)
- Achieving positive carbon impacts which we calculate as being the lifetime CO_2 absorption of 3,800 trees;
- Offering access to EVs: 11% of the London car club fleet is electric, compared to less than 2% of privately-owned cars in London.

1.2 In London, the two most common models of car clubs are the round-trip and flexible models.

- With round-trip car clubs, cars are located in designated on-street or off-street bays. Users may book in advance. At the end of the hire period, users return the car to the bay they picked it up from.

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[1] CoMoUK London Car Club Survey 2020

[2] The most recent data available as 2020's data was significantly affected by the overall drastic cut in Londoners' mileage due to the Covid pandemic.

[3] Again, public transport use in London was much affected by the Covid pandemic.

[4] 2020 research op cit.

- With flexible car clubs, cars may be located on-street (but not in designated bays), or off-street and do not necessarily need to be returned to the same location where they were picked-up.

1.3 There are now over 620,000[5] car club members in London, up from 600,000[6] in 2020 and 300,000 in 2019[7]. This is strong evidence that more and more Londoners are recognising the benefits of sharing, rather than owning, a car. These benefits include convenient access to cleaner vehicles without the hassles and expense of ownership (such as tax, MOT, fuel, servicing, repairs, depreciation and parking). CoMoUK research shows that for members who drive less than 6-8,000 miles per year, a car club could save up to £3,500 a year.

London's transport challenges

1.4 The Mayor's Transport Strategy (MTS) (March 2018) sets out the Mayor's vision for transport in London to 2041. It articulates how transport will support 'Good Growth' in London – sustainable and inclusive growth in the economy and the city's population. Key to delivering this growth, and tackling the challenges of inactivity, congestion (and inefficient use of road space), poor air quality and road danger, is a concerted effort to change the transport mix, and to continue to move Londoners away from car use, and towards sustainable modes of travel (walking, cycling and public transport).

1.5 The vision to change the transport mix is underpinned by an ambitious target:

> *"The central aim is for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041." (Mayor's Transport Strategy, 2018)*

1.6 As this report shows, these bold MTS objectives are not at all at odds with car clubs; but rather that car clubs can play a significant role in delivering them. This is most apparent in car club's role in reducing car dependency and the negativities associated with privately owned car use; in supporting increased rates of walking and cycling; and promoting public transport use.

Exploring the opportunity for an enhanced car club offer in London

1.7 CoMoUK has commissioned the research consultancy Steer to explore and quantify how an enhanced car club offer in London can directly support progress towards the goals in the MTS, including the headline ambition for 80 per cent of all trips in London to be made by sustainable modes by 2041.

1.8 The objectives of the project were to identify:

- the potential for households to switch from private car ownership to car club membership in London and the geographical distribution of that potential;
- the scale of enhanced car club provision needed to realise the potential;
- the benefits of additional car club provision as an alternative to private car ownership in London; and

[5] Operator-supplied data, as at 31 October 2021

[6] Operator-supplied data, as at 31 October 2020

[7] Operator-supplied data, as at 31 March 2019

- how the enhanced offer might be achieved, and the help required from partners and authorities in delivery.

This report

1.9 This report presents the findings of the analysis undertaken in the exploration of the research objectives identified and some of the emerging conclusions and recommendations associated with the evolution and enhancement of car club provision in London.

1.10 We have primarily used pre-Covid-19 London Travel Demand Survey data for the analysis, while more recent 2020 data is used when measuring behavioural change of users such as preference for car ownership and usage.

1.11 The remainder of this report is structured as follows:

- Chapter 2 outlines the current policy context for car clubs, showing how and where car clubs are referenced in relevant transport policy;
- Chapter 3 presents the results of the analysis undertaken to calculate the potential for reducing private car use and ownership through car clubs in London and the number of car club cars required;
- Chapter 4 shows the range and scale of benefits that could be realised if car-owning households that could feasibly switch to car club membership were to do so; and
- Chapter 5 includes recommendations for realising the potential and associated benefits in the short-, medium- and longer-term.

2 The policy context for car clubs

2.1 Though there are sections of the MTS that suggest that there is some understanding of the role that car clubs can play in changing the transport mix and reducing car dependency, overall support for car clubs is missing. With an ambitious target of 80 per cent of all trips in London to be made by sustainable modes by 2041, policy-makers have taken an absolute approach to cars and car use, failing to understand the marked differences between a car club car and a private car, in terms of car ownership and use.

2.2 The MTS explicitly recognises car clubs as part of a solution to enable a reduction in car use where cars are still required for certain types of trips, outside of the Central Activities Zone (CAZ) / Central London, where trip characteristics and public transport provision is such that car use should not be necessary at all. In the section on reducing car use, one of the proposals sets out the Mayor's support for car clubs where car club provision is coupled with a reduction in the space available for private car parking:

> *"Policy 19: The Mayor, through TfL and the boroughs, will support the provision of car clubs for residents when paired with a reduction in the availability of private parking to enable more Londoners to give up their cars while allowing for infrequent car travel in inner and outer London."*

2.3 Aside from this mention of the circumstances under which car clubs should be actively promoted in London, the MTS has a certain apprehensiveness about whether providing a car club option in an area where people already walk, cycle or use public transport for the majority of their trips has the potential to detract from the sustainable mode share and induce demand for car use.

Car clubs can have a role in delivering the MTS through their alignment with Policy 23

2.4 However, there is a policy within the MTS which is very closely and positively aligned with what car clubs do – Policy 23. This sets out the principles that the Mayor and TfL will use to consider how new transport services (including car clubs, and new models of car clubs) should be explored and managed. These principles, which are aligned with the Healthy Streets Approach, a cornerstone of the MTS, could be read as a list of the objectives that a future car club strategy for London should meet, or be strongly aligned with. The key aspects of Policy 23 are as follows:

"The Mayor, through TfL, will explore, influence and manage new transport services in London so that they support the Healthy Streets Approach, guided by the following principles:

Table 2.1: How car clubs align with MTS Policy 23

Mayor's Transport Strategy Principle	How car clubs help deliver the principles
a. Supporting mode shift away from car travel: new transport services should not encourage more car journeys, especially where there are good walking, cycling or public transport options.	✓ Car clubs allow members to reduce their reliance on the private car. After joining a car club, members reduce their car trips by 10%.
b. Complementing the public transport system: new services should help more people who would otherwise complete their journey by car to access the public transport network, while not reducing walking and cycling to and from stops and stations.	✓ Car clubs allow members to reduce their reliance on the private car, facilitating more frequent travel by public transport, walking and cycling, complemented by occasional trips by car[8].
c. Opening travel to all: new services should be accessible to all Londoners and should not contribute to the creation of social, economic or digital divides.	✓ Car club membership is available from age 21 for the majority of individuals with a full driving licence.
d. Cleaning London's air and reducing carbon emissions: new services should achieve the very best emissions standards.	✓ After joining a car club, members reduce their car trips by 10%. ✓ 100% of car club cars in London are ULEZ compliant and produce lower emissions than the average Londoner's private car. ✓ Almost 1 in 10 car club cars in London are Ultra Low Emission.
e. Creating a safe, attractive environment on our streets: new services and technology should help create a safer, quieter and more pleasant environment on London's streets.	
f. Using space efficiently: new services must make efficient use of road and kerb space.	✓ 40% of car club members who own a car sell or dispose of a private car after joining a car club, reducing car parking space required.
g. Sharing data and knowledge: where possible, data and knowledge should be shared with TfL and the GLA to enable improved monitoring, operating and planning of the transport network.	✓ Car club operators share data with boroughs and participate in the CoMoUK Annual Survey to help determine who uses car clubs and why. There is an opportunity to centralise car club data sharing, as above.

2.5 Overall, therefore, evidence shows that the MTS is much too cautious about the role of car clubs, and so has not sufficiently supported the potential positive impact of car clubs in London. There is support for car clubs where they will enable a reduction in car use and dependency (and a reduction in the challenges associated with car use, e.g. pollution). What is missing is a framework of supportive measures to have car clubs more widely available and as well used as possible, in order to maximise the shift from private car use to more sustainable travel, where car clubs supplement a majority of trips being made by public transport, walking and cycling. Our recommendations build on this point.

[8] Compared to the average Londoner, round trip car club members are more frequent cyclist and users of Underground, bus and rail services, CoMoUK London car club survey, 2020.

3 Calculating the potential for car club use in London

3.1 This chapter presents the results of the analysis undertaken to calculate the potential for reducing private car use and ownership through car clubs in London, and outlines the methods and data sources used for the analysis.

3.2 There were two separate aspects to the analysis: the first was to identify London households that own at least one car, where the characteristics of the household, the drivers within the household, and the trips currently made by private car are such that the trips could feasibly be made using a car club car instead. This analysis can be done at London borough level, and is referred to as the 'switchable households' analysis.

3.3 Following this analysis the second part of this chapter explores the number of additional car club cars required at a borough level.

3.4 The third aspect of the analysis of the potential for car clubs was to explore the geographical distribution of potential within London, i.e. identify where the underlying characteristics of the area and the travel habits and demographics of the households within those areas combine to form optimal conditions for car club use. This analysis can show differences at a sub-borough level, and is referred to as the 'distribution of potential' analysis.

Switchable households

Objective

3.5 The objective of the switchable households analysis was to identify how many households have at least one privately owned car, and, of those households, identify those households with specific characteristics that mean that they could feasibly switch those trips which are not possible by public transport, walking or cycling to a car club car instead of a privately owned vehicle in the future.

Data sources

London Travel Demand Survey (LTDS)

3.6 The central source of data for the analysis was Transport for London's (TfL's) London Travel Demand Survey (LTDS) 2017-2018[9]. LTDS is a continuous household survey of the London area, covering all London boroughs and the City of London. The survey records detailed information about the household, the people that live there, and the trips they make. Every year, approximately 8,000 households take part in the survey which is then weighted using an interim expansion factor to approximate the data for the entire population of London, thus providing an insight into how Londoners travel on a weekly basis.

[9] The analysis was carried out prior to the release of the latest LTDS 2019/20 survey data.

London Car Club Annual Survey

3.7 Data about the demographic profile of current car club users from the 2017/18 Car Club Annual Survey, published by CoMoUK has been used as an input to the spatial analysis to consider where underlying demand for car clubs is greatest. Information from the most recent 2019/20 member survey about changes in car ownership, travel behaviour and from the operator survey about the profile of car club vehicles, compared to the private car fleet has been used to calculate the potential impacts and benefits of growing car club provision across Greater London.

Method

3.8 To identify the number of switchable households, the LTDS database was analysed. Only households with at least one private car were in-scope for this analysis.

3.9 After identifying in-scope households (households with at least one private car), a series of 'filters' were applied to the data to remove households, people, and trips with characteristics that make it unlikely that the household could switch from a private car to car club car. The filters were designed to reflect the characteristics of the majority of trips which are possible with a car club. Trips can be complicated by any number of factors, some of which apply regularly, and some of which apply far less frequently, and it is recognised that substituting a private car trip with a car club trip is not always feasible or preferable. The analysis therefore takes a reasoned yet pragmatic approach to identify the total, maximum potential for the substitution of households that make trips currently by private car to car club car, recognising that it is likely that many other complex factors at a household and individual level will determine whether a car club is the 'right' solution for any household.

3.10 It should be noted that the LTDS database collects two days' worth of trips per household, which is then weighted into a weekly trips format as a snapshot of a typical week. This means that car-owning households that did not make any car trips during these two days are immediately discounted once the LTDS trip data table is linked to the household data table. Therefore, applying trip filters does not accurately represent the overall number of households that have the propensity to switch to car clubs, only those who made a trip by private car in the two days sampled.

3.11 To account for this, we used a two-step method to calculate the overall number of switchable households. Step 1 involved calculating the switchable households based on household, person, and trip filters, and combining this with Step 2, which involved calculating the switchable households based on household and person filters (excluding whether a car trip was made) and removing any double-counted households from Step 1.

3.12 Due to these extra households, it is not possible to accurately calculate the number of 'switchable trips' which is why the analysis focuses on switchable households. The London Annual Car Club Survey benefits are also based on household numbers, rather than trips.

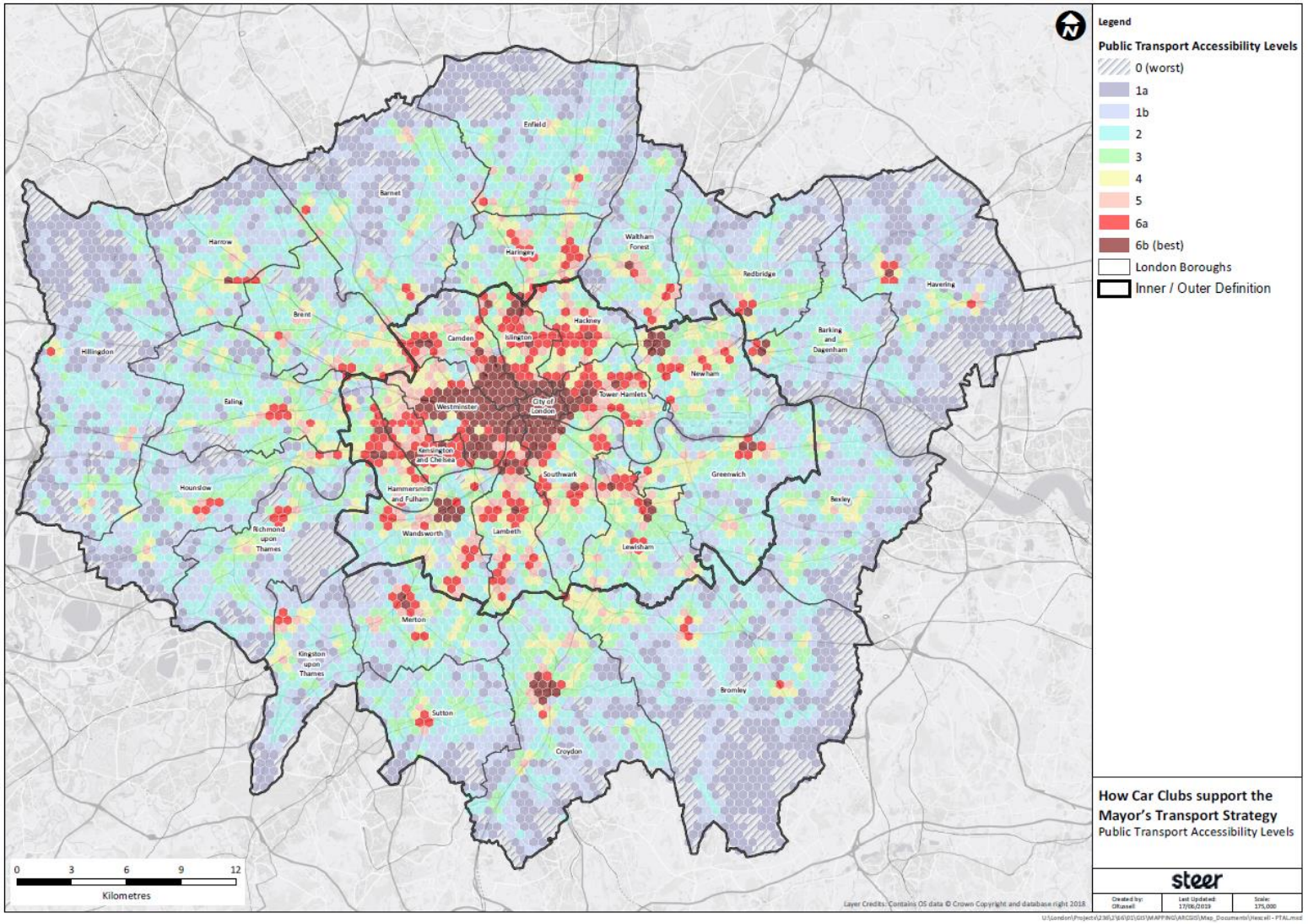
3.13 The filters – criteria which meant corresponding households, people, and trips were eliminated from further analysis and therefore not counted as 'switchable' – are shown in the following table:

Table 3.1: Switchable households analysis filters

Criteria	Filter	Reason/evidence for elimination
Age of driver	**Driver is less than 23 or over 75** *(Drivers between the ages of 23 and 75 (inclusive) remain in-scope)*	The minimum age for access to most car clubs is 23, with some providing access to younger drivers. Older drivers are far less likely to be members of car clubs.
Car use frequency	**Driver makes 5 or more trips per week by car** *(Drivers making fewer than 5 trips per week by car remain in-scope)*	Car owners who use their car more frequently are less likely to use car club cars.
Disability	**Driver has a Blue Badge** *(Drivers without a Blue Badge remain in-scope)*	Drivers with a Blue Badge have mobility difficulties and may need to use a specially-adapted vehicle. They also may not be able to walk far enough to reach a local car club vehicle.
Group size	**Trip group size is more than 5** (Trips where the group size is up to or equal to 5 remain in-scope)	The maximum number of people that can travel in the majority of car club cars is 5 (one driver and up to 4 passengers).
Access to public transport	**Household is in a location with decreased accessibility to public transport (Public Transport Accessibility Levels (PTALs)[10] is less than 3)** Figure 3.1 on the following page shows PTAL throughout London. *(Households with a PTAL of 3 or more remain in-scope)*	Not all households that currently make trips in a private car would switch to a car club car if the private car was given up. Some car trips would be made by public transport instead. A good base-level of public transport provision is needed to make occasional car club use viable.

[10] PTALs have been developed by TfL to classify London by accessibility to public transport service. PTALs range from 0 to 6b. 0 represents the least accessible parts of the capital by public transport, with 6b representing the most accessible parts of the capital by public transport. Residents in PTAL 3 or lower have been excluded from our analysis due to lower levels of public transport accessibility. This limit the ability to access regular public transport required to support car club use and reduce the need to own a private car.

Figure 3.1: PTAL (Public Transport Accessibility Level) map for London



Results – switchable households

There are almost 650,000 car-owning households in London that could give up a car and switch to car club use.

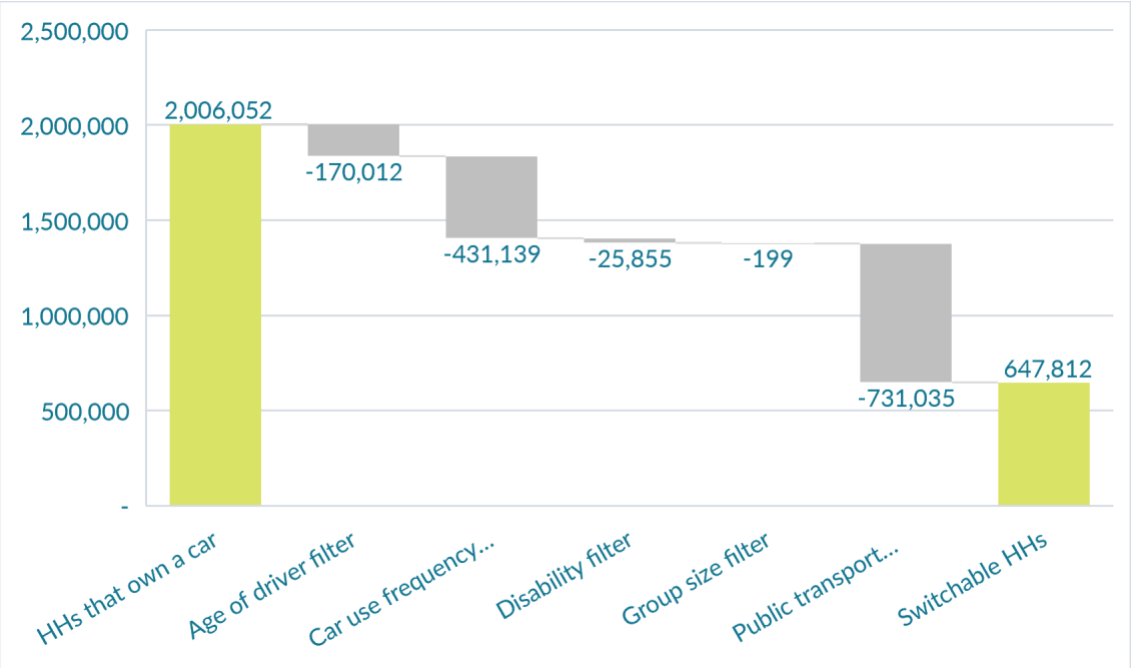
3.15 There are 2,006,052 households in London that own at least one car. In Inner London this number is 625,925 and in Outer London this number is 1,380,127. Taking into account households with more than one car, this is a total of more than 2.6 million private cars across Greater London.

3.16 Applying the filters to car-owning households shows that there are 647,812 households across London that could substitute at least one of their owned cars for a shared car club car. In Inner London this is 362,901 and in Outer London this number is 284,911.

3.17 Figure 3.2 shows how the application of the different filters/exclusion criteria affects the total number of in scope households for all London. Reading the chart from left to right shows a staged reduction in the number of in scope households, with the final bar on the right showing the potential switchable households after the filters have been applied. As can be seen, the different filters have different impacts – some substantial and some marginal. For example, applying the car use frequency filter removes 431,139 households from the total number of switchable households, but the group size filter (i.e. excluding households with a car that make car trips where the group size is more than five) only removes 199 households from the total.

3.18 The access to public transport filter has the greatest impact on the total number of switchable households. Excluding households with a Public Transport Accessibility Level (PTAL) of less than 3 means that 731,035 fewer households are in scope across London.

Figure 3.2: Transition from car-owning households to switchable households (impact of filters) – all London totals



3.19 Figure 3.3 and Figure 3.4 show the same transitions from the total number of car-owning households to the number of switchable households, for Inner and Outer London boroughs respectively.

3.20 The number of car-owning households in Inner London is less than half of the number of car-owning households in Outer London, meaning that the number of in scope households starts out considerably lower in Inner versus Outer London. However, because cars are typically used more frequently, and access to public transport is typically not as good in Outer London compared to Inner London, removing households that use their car frequently, and households with a PTAL of less than 3, has a more significant impact on the remaining potential in Outer London than it does in Inner London, which results in 362,901 switchable households in Inner London (58% of households that own a car), and 284,911 switchable households in Outer London (21% of households that own a car).

Figure 3.3: Transition from car-owning households to switchable households (impact of filters) – Inner London

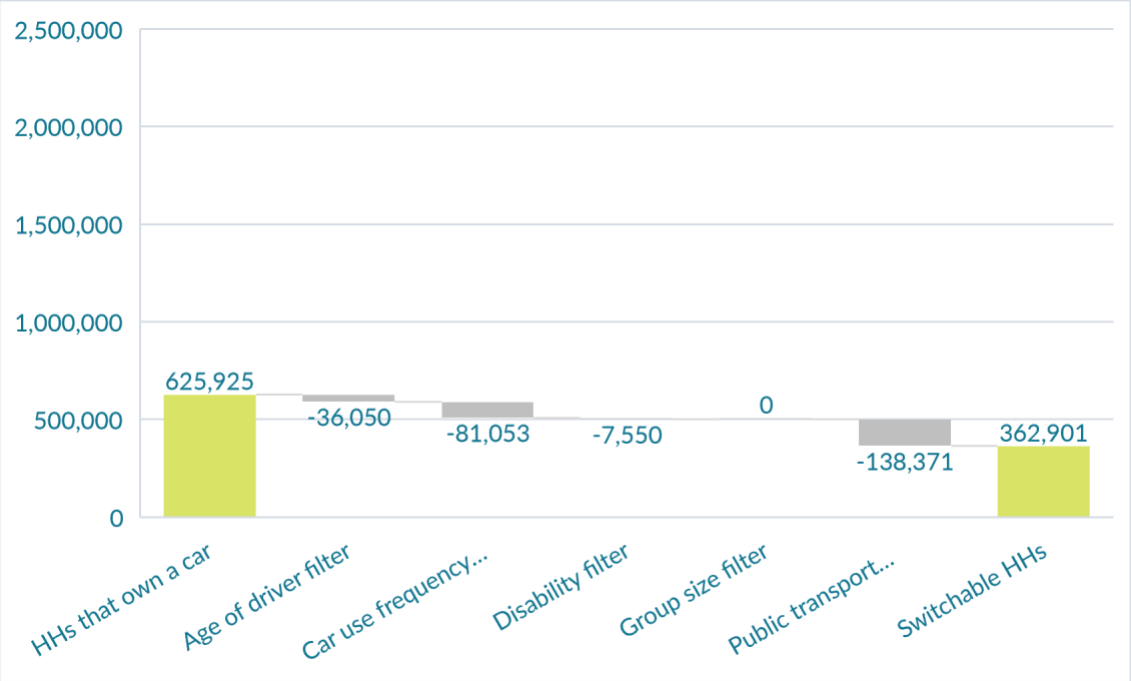
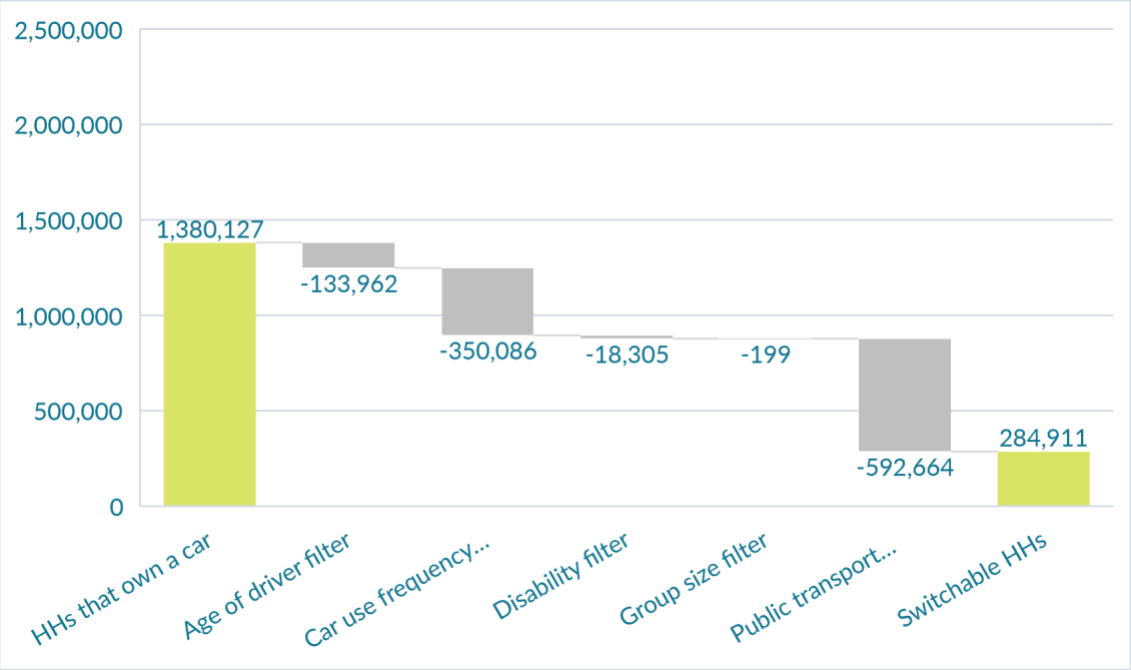


Figure 3.4: Transition from car-owning households to switchable households (impact of filters) – Outer London



Switchable households by borough

There are 17 London boroughs with more than 20,000 switchable households. The boroughs of Lambeth, Lewisham, Southwark and Wandsworth all have more than 30,000 car-owning households that could switch to car club use.

3.21 The number of car-owning households and the number of those households that could substitute a privately owned car for a shared car club car (with non-switchable households determined by the filters and removed from the total) are shown by borough in Table 3.2. For reference the table also shows the number of private cars currently owned by borough and the proportion of households who currently own at least one car who could reduce their car ownership and car trips given an expansion of car clubs in the borough.

Table 3.2: Switchable households by borough

	Car-owning households (at least one car)	Total private cars	Households that could substitute an owned car for a shared car club car	
			Number	Percentage
Inner London	**625,925**	**725,973**	**362,901**	**58%**
Camden	31,865	34,339	23,362	73%
City of London & Westminster*	38,856	41,904	29,932	77%
Greenwich	64,233	82,492	21,176	33%
Hackney	32,703	35,402	26,209	80%
Hammersmith & Fulham	37,759	44,651	22,252	59%
Islington	31,863	35,506	23,976	75%
Kensington & Chelsea	33,821	37,681	25,569	76%
Lambeth	60,949	69,819	37,540	62%
Lewisham	69,333	81,544	32,805	47%
Newham	60,400	71,516	26,269	43%
Southwark	58,756	67,502	37,322	64%
Tower Hamlets	37,904	45,411	21,429	57%
Wandsworth	67,485	78,206	35,058	52%
Outer London	**1,380,127**	**1,897,889**	**284,911**	**21%**
Barking and Dagenham	48,968	64,110	6,660	14%
Barnet	102,582	138,485	20,382	20%
Bexley	73,860	103,236	8,323	11%
Brent	59,297	79,292	14,601	25%
Bromley	106,150	148,991	23,458	22%
Croydon	103,475	142,697	29,869	29%
Ealing	73,812	98,105	19,090	26%
Enfield	94,188	127,316	12,396	13%
Haringey	51,176	61,622	24,442	48%
Harrow	64,876	91,644	12,703	20%
Havering	80,976	113,749	9,908	12%
Hillingdon	82,891	131,035	6,643	8%
Hounslow	70,352	98,260	15,800	22%
Kingston upon Thames	53,342	75,105	9,222	17%
Merton	57,390	73,103	14,795	26%
Redbridge	73,832	110,097	18,862	26%
Richmond upon Thames	57,986	77,348	12,258	21%
Sutton	66,375	93,133	11,285	17%
Waltham Forest	58,600	70,561	14,214	24%
London total	**2,006,052**	**2,623,862**	**647,812**	**32%**

*City of London and Westminster are grouped together as the household projection estimates from the Greater London Authority (GLA) for the two is combined and therefore the households are weighted together in LTDS.

Number of additional car club cars required

21,000 additional car club cars are required across London to unlock the benefits of car clubs for the switchable households identified.

3.22 Based on data from the latest London Car Club Annual published by CoMoUK (2019/20) we have calculated that there are approximately 50 active car club members for each car club car. To estimate the number of additional car club cars required to serve potential demand we have divided the number of households that could substitute an owned car for a shared car club car in Table 3.2 by 50. This is a calculation designed to demonstrate the order of magnitude requirement for additional car club cars to serve demand from switchable households identified. Serving the additional potential demand will require a mix of flexible and round-trip vehicles, as well as supporting policy and action (see our recommendations in chapter 5).

3.23 The number of additional car club cars required across London is just under 21,000 cars, with around 12,400 required in Inner London and just over 8,600 required in Outer London. The number of additional car club cars by borough, as well as an indicative existing number of car club cars in each borough (these numbers are derived from a snapshot data capture and therefore represent numbers as of October 2020), are shown in Figure 3.5 and Figure 3.6.

Figure 3.5: Number of additional car club cars required – Inner London

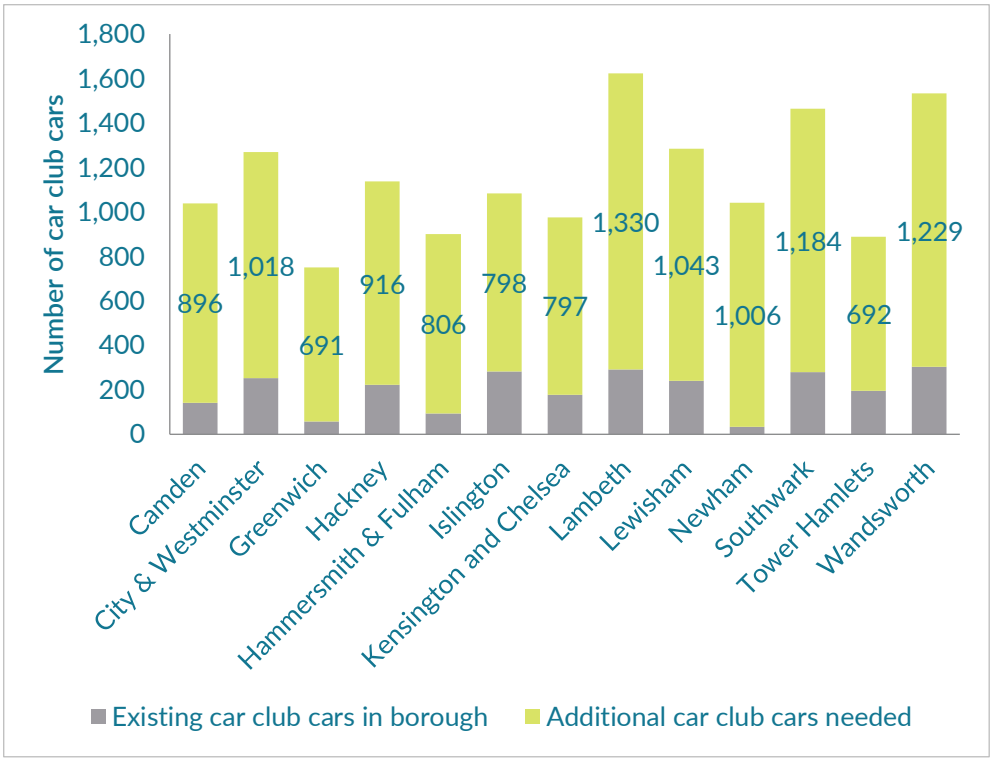
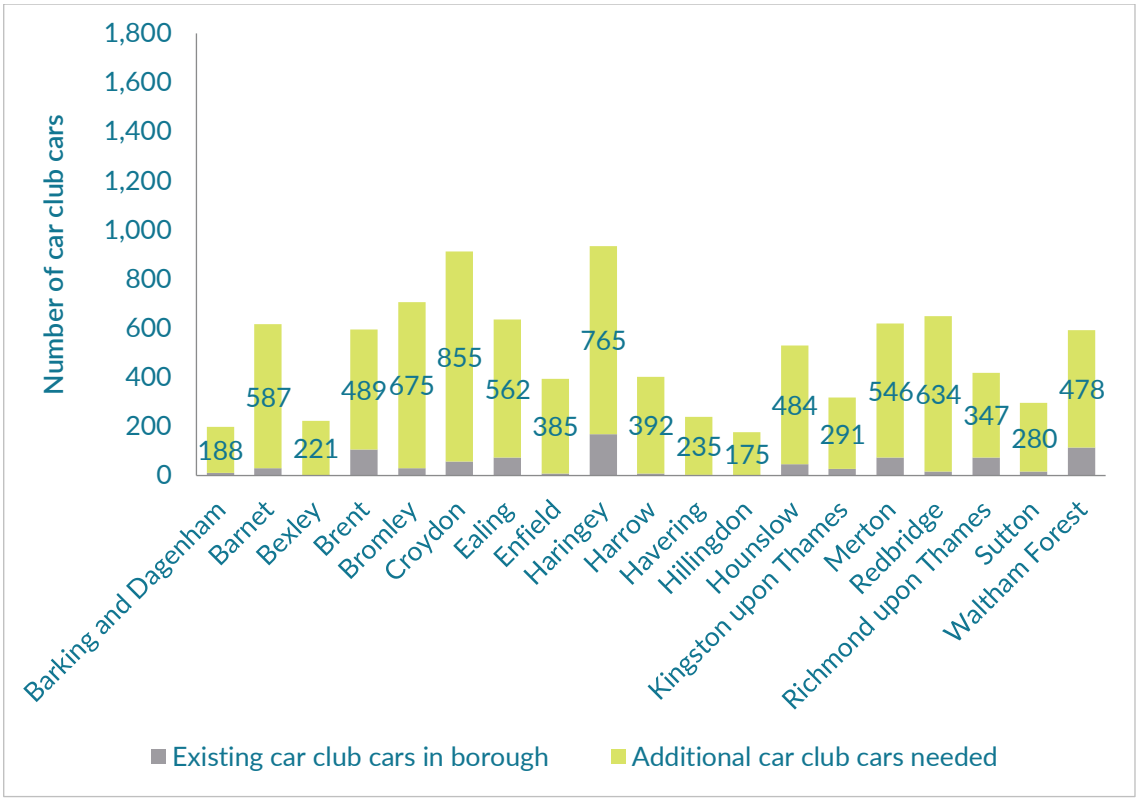


Figure 3.6: Number of additional car club cars required – Outer London



Distribution of potential

Objective

3.24 The objective of this task was to show, at a sub-borough level, where the potential for the use of car clubs is greatest, considering the underlying characteristics of the area, the travel habits and demographics of the households within those areas, and combining those characteristics with an understanding of the people who are more likely to be members of car clubs already.

Data sources and method

3.25 To help better understand car club potential in London analysis was undertaken to establish residential locations which may provide opportunities for growth in car club provision. A number of factors were mapped and combined to produce a single residential potential map. This was then compared with existing car club locations to highlight areas where there is good potential but currently little or no car provision.

3.26 Table 3.3 outlines the factors included in the analysis and the reason for their inclusion.

Table 3.3: Residential potential indicators

Car club potential variable	Reason for inclusion
Population	Higher population densities increase potential by allowing operators to place more cars to meet local demand.
Population growth	Areas that will see higher population growth have the potential to enable car club provision to meet local demand.
Car ownership	Households with more than 1 car have higher potential as these households may benefit from replacing a car with car club membership. Lower car ownership levels are a key objective for most London boroughs.
Method of travel to work	Households with a higher proportion of workers travelling to work by non-car models are not reliant on a car for commuting so may benefit from occasional car use offered by a car club.
Public Transport Accessibility Level (PTAL)	Areas with a higher PTAL score have better access to public transport services so again are not reliant on private vehicles for travel so may benefit from occasional car use offered by a car club (see Figure 3.1 for PTAL map).
Weighted population	Using TCoL (Transport Classification of Londoners[11]) data and car club annual survey data this layer weights the population by a propensity to use car clubs. The higher the weighted population the more likely the local population will shift to car club providers.

3.27 Once each of the above factors was mapped the data was aggregated into a hexcell layer to provide a consistent and comparable geography. The hexcell layer was 500 metres in diameter. The next stage of the analysis was to rank each factor in order of

[11] TCoL is a population segmentation developed by TfL to classify Londoners by their demographic, travel and attitudinal characteristics.

highest to lowest potential and a combined score was calculated showing the overall potential for car club provision.

3.28 The map has been used to identify areas of opportunity for future car club provision. These are locations with high car club potential but limited or no existing provision.

Results

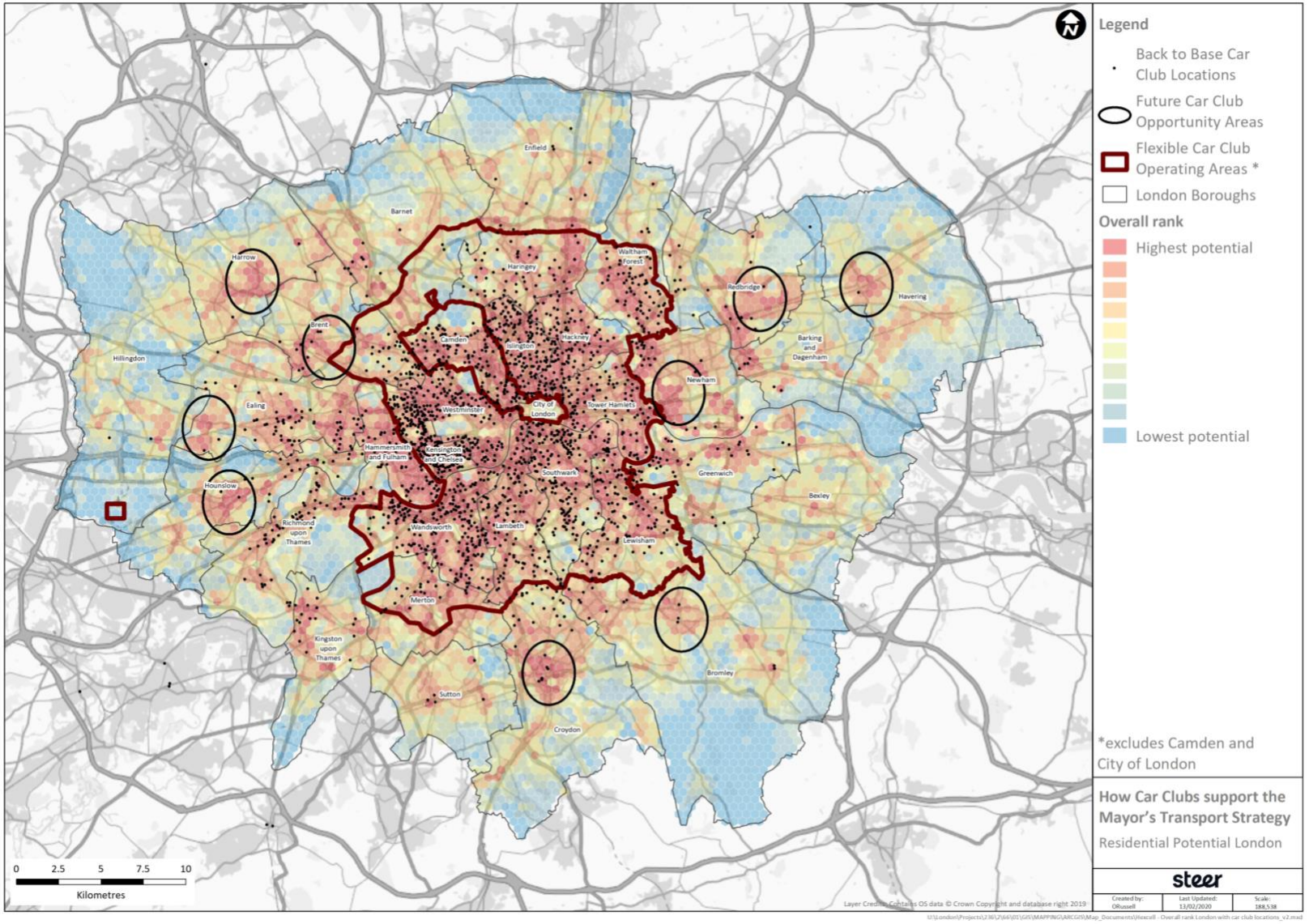
The potential for car club use is highest in Inner London, but there are several areas in Outer London – principally in local town centres – which have high potential but limited or no car club provision.

3.29 The analysis above resulted in the map in Figure 3.7 where red hexcells have the higher potential moving to blue which have the lowest potential for car club growth. As could be expected given the factors considered, the highest potential is in Inner London, where existing car club provision is greatest (although still has significant growth potential). There are however a number of areas in Outer London which have high potential but lower existing car club provision, these areas include: Barking, Barnet, Bromley, Croydon, Harrow, Hounslow, Ilford, Romford and Wembley.

3.30 Any expansion of car club provision in these areas will nonetheless depend on the policy environment to be found there, as we detail elsewhere in this report.

3.31 It can be expected that as the concept of car clubs are better understood in Outer London, that this underlying demand expands geographically from the current areas of higher potential, but this will be more limited in areas where public transport accessibility is lower.

Figure 3.7: Distribution of potential for car club use



4 What an enhanced car club offer could deliver

4.1 Using the results of the switchable households analysis, which, on the basis of the demographics of the drivers in the household and the nature and frequency of trips usually made by car (among other factors, see

4.2 Table 3.1), identified the number of car-owning households which could switch to car club use, we have calculated the benefits of this switch being made, given sufficient car club cars provided.

4.3 The benefits which could be realised are divided into two main areas, both of which are key policy priorities of the Mayor's Transport Strategy: reducing car dependency and car use; and improving air quality. They can play a particular role in avoiding households switching into car ownership for the first time due to changed travel patterns during the Covid-19 pandemic.

Reducing car dependency

Reducing car mileage

Greater provision of car clubs can reduce Londoners' annual car mileage by 340 million miles.

4.4 Households that join a car club reduce the mileage that they travel by car. Using data from the London Car Club Annual Survey published by CoMoUK (2017/18)[12] we have calculated that after joining a car club, on average members reduce their annual car mileage by 526 miles.

4.5 Based on this annual mileage reduction and the number of households that could substitute an owned car for a shared car club car results in a potential annual mileage reduction of 340 million miles.

4.6 The potential annual car mileage reduction by borough is shown in Figure 3.5 and Figure 3.6.

[12] Latest data from the 2019/20 Car club survey is not used due to impacts of Covid-19 travel restrictions

Figure 4.1: Annual reduction in car mileage – Inner London

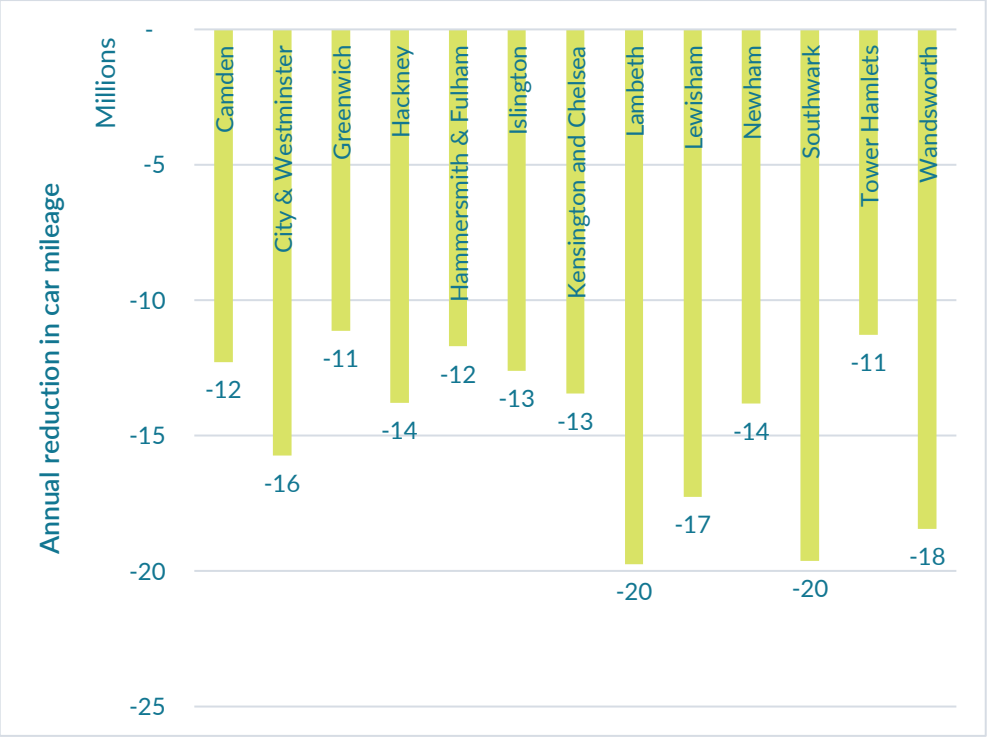
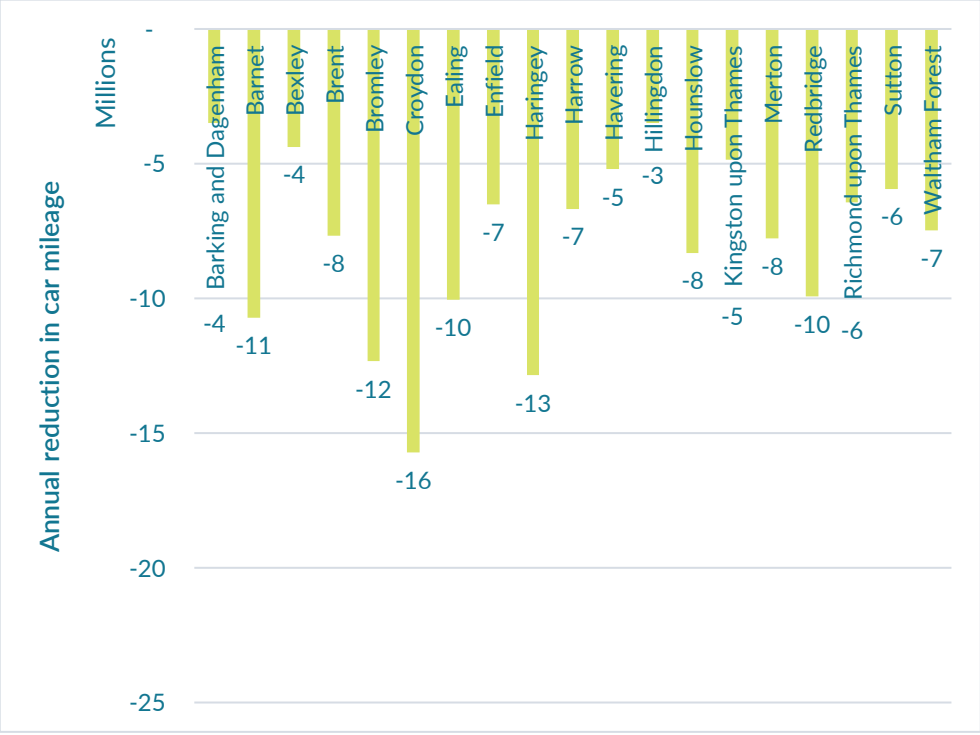


Figure 4.2: Annual reduction in car mileage – Outer London



Reducing car trips

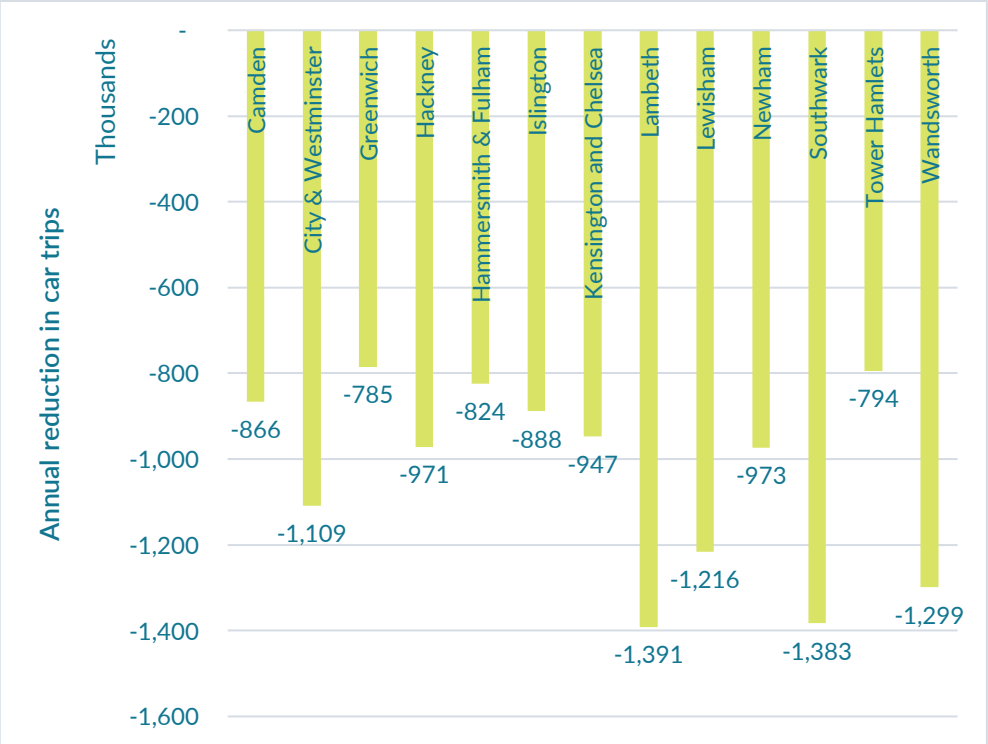
Greater provision of car clubs can reduce Londoners' annual car trips by 24 million trips.

4.7 Households that join a car club reduce the number of car trips they make. Using data from the latest London Car Club Annual published by CoMoUK (2017/18)[13] we have calculated that after joining a car club, on average members reduce their weekly car trips by 10%.

4.8 Based on this reduction in car trips and the number of households that could substitute an owned car for a shared car club car results in a potential reduction of 24 million car trips.

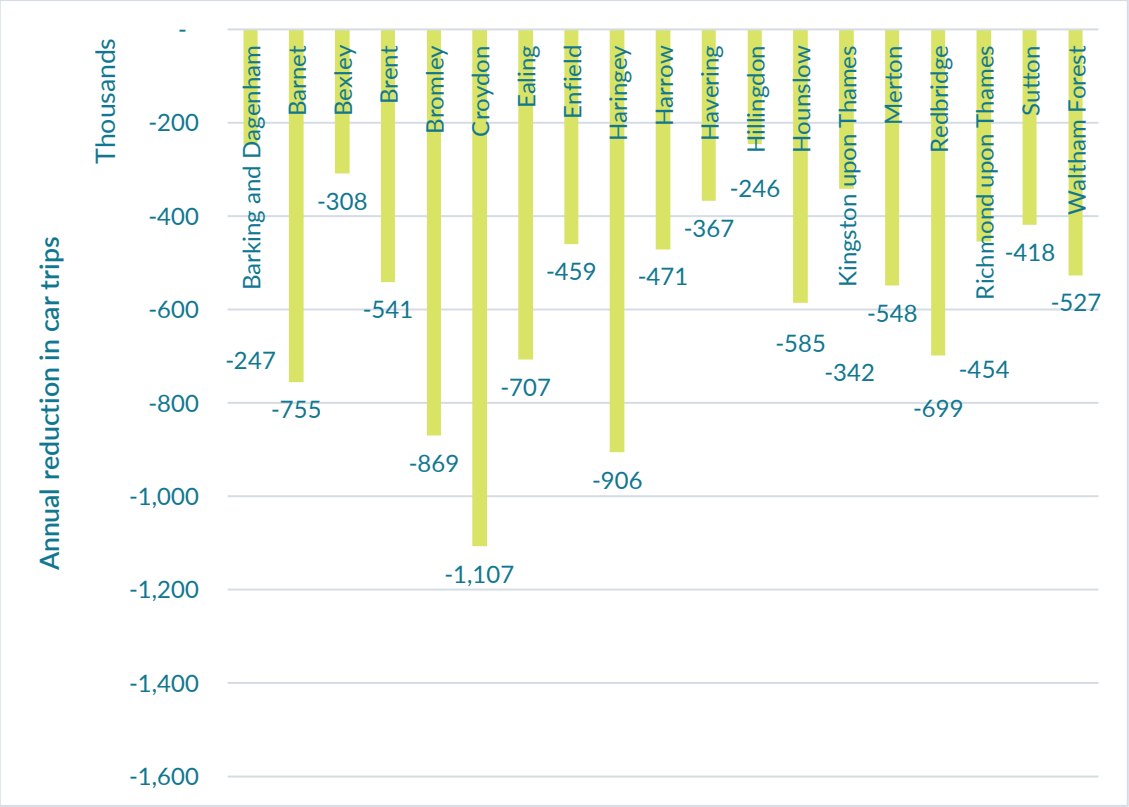
4.9 The potential annual car trip reduction by borough is shown in Figure 4.3 and Figure 4.4.

Figure 4.3: Annual reduction in car trips – Inner London



[13] This data was not collected in the latest 2019/20 Car club member survey due to Covid-19 travel restrictions

Figure 4.4: Annual reduction in car trips – Outer London



Reducing car ownership

Car clubs can help Londoners to own 300,000 fewer private cars. This is equivalent to a row of parked cars stretching from London to Budapest.

4.10 Car club membership results in lower levels of car ownership. Using data from the latest London Car Club Annual published by CoMoUK (2019/20) we have calculated that after joining a car club, on average 46% of members who owned a private car on joining sold or disposed of a private car after joining a car club.

4.11 Based on this reduction in car ownership and the number of households that could substitute an owned car for a shared car club car there is potential for 300,000 fewer privately owned cars across Greater London, 170,000 fewer in Inner London and 130,000 fewer in Outer London.

4.12 The potential reduction in car ownership by borough is shown in Figure 4.5 and Figure 4.6.

Figure 4.5: Reduction in private car ownership – Inner London

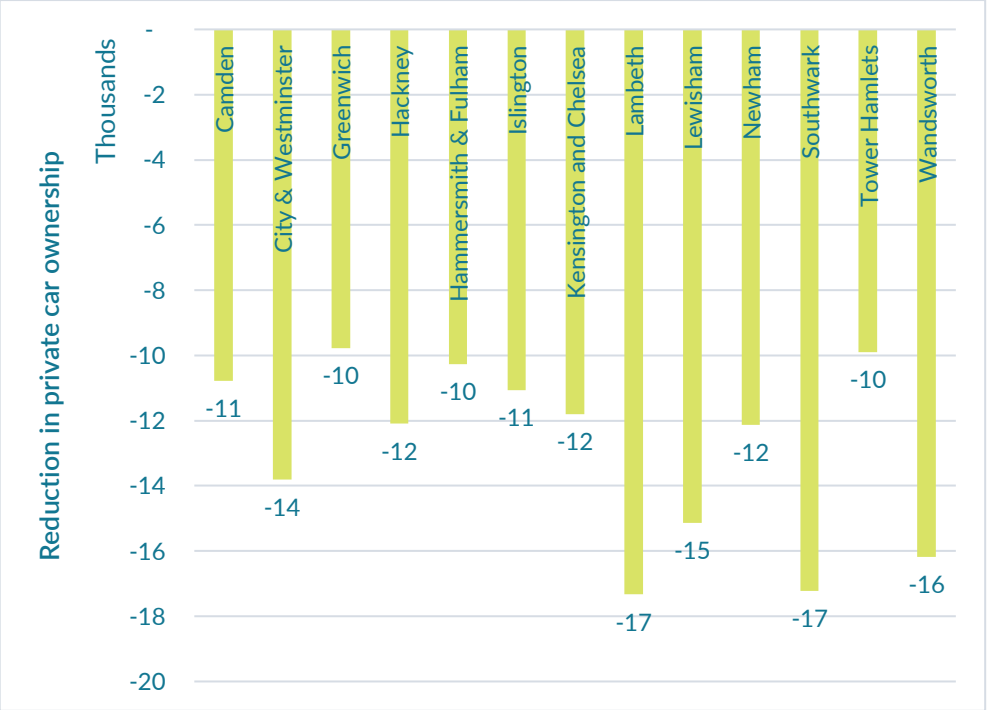
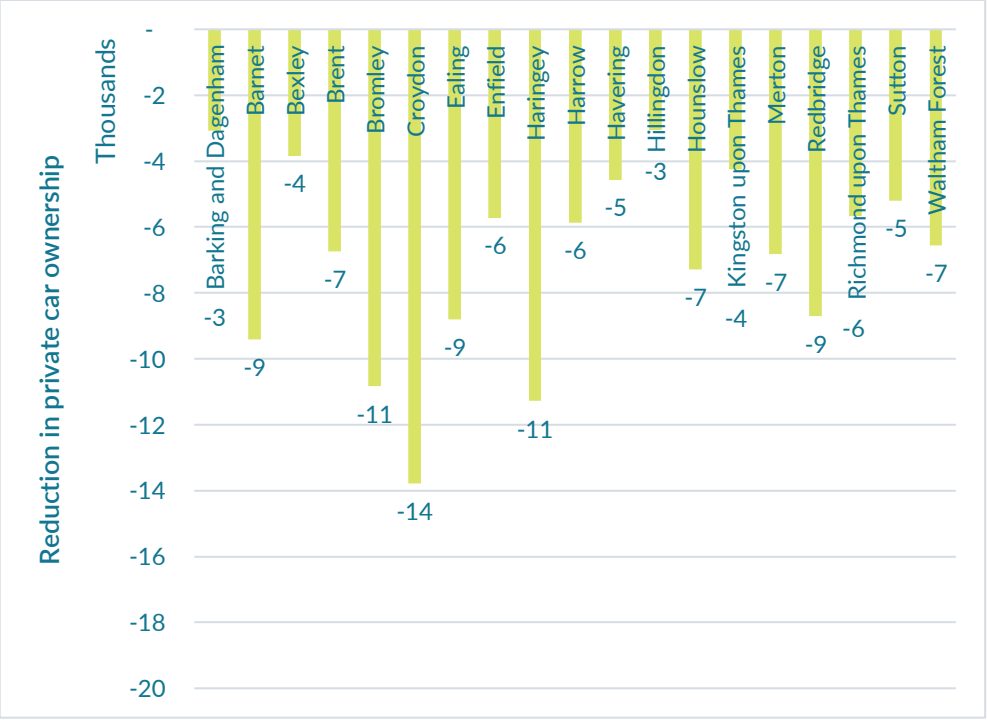


Figure 4.6: Reduction in private car ownership – Outer London



Deferred purchase of a new car

Car clubs can help Londoners to defer purchase of 400,000 private cars. This is equivalent to more than half of total vehicles registered in Inner London.

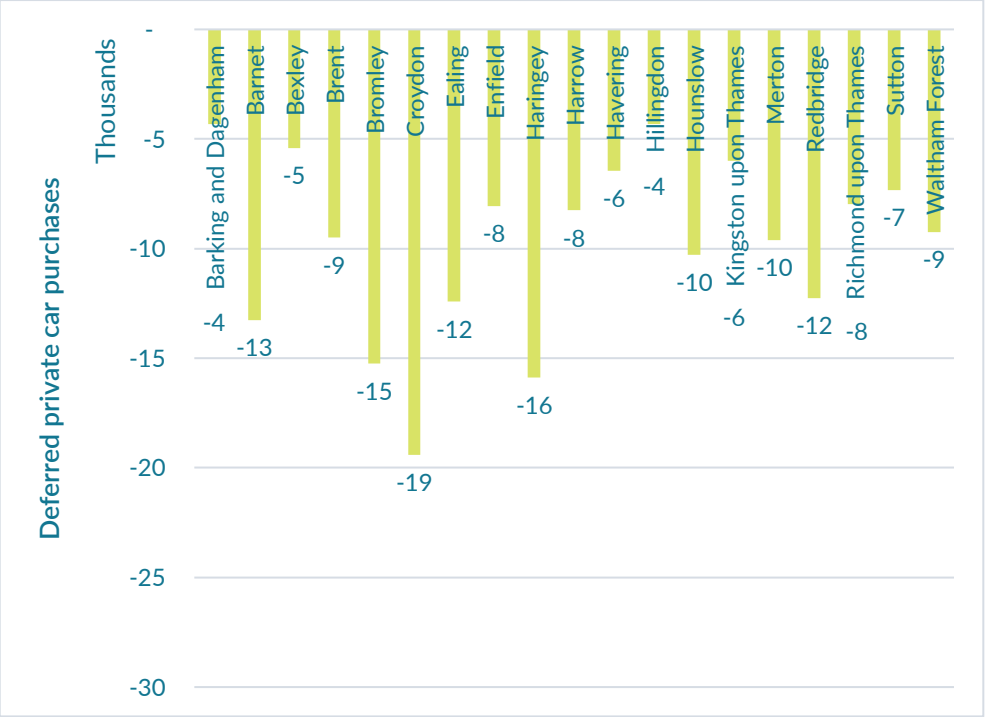
4.13 Availability of car clubs encourage households to delay purchase of a new or additional car. Using data from the latest London Car Club Annual published by CoMoUK (2019/20) we have calculated that on average 65% of members would have bought a new car had they not joined a car club.

4.14 Based on this deferred car purchase and the number of households who own at least one car and can potentially join a car club, we have calculated that approximately 400,000 new car purchases can be delayed across Greater London, with 240,000 deferred purchases in Inner London and 160,000 deferred purchases in Outer London.

4.15 The potential for deferred car purchase by borough is shown in Figure 4.7 and Figure 4.8.

Figure 4.7: Deferred purchase of a new car – Inner London

Figure 4.8: Deferred purchase of a new car – Outer London



Improving air quality

Reduction in ULEZ non-compliant cars

Car clubs can help 194,000 households across London to dispose of/sell their ULEZ non-compliant car.

4.16 Transport for London calculate that 30% of Londoners own a private vehicle which is not compliant with the ULEZ standards. Applying this figure to the private car fleet owned by households that could substitute an owned car for a shared car club car results in 194,000 ULEZ non-compliant private cars which could be disposed of or sold, with greater provision of car club cars providing a ULEZ compliant alterative. The London car club fleet is 100% ULEZ compliant, and the fleet does not include any diesel cars, which are 40% of the UK car fleet.

4.17 In Inner London this could result in 109,000 fewer ULEZ non-compliant private cars and 85,000 fewer in ULEZ non-compliant cars in Outer London.

4.18 The potential reduction in ULEZ non-compliant cars owned by borough is shown in Figure 4.9 and Figure 4.10.

Figure 4.9: Reduction in ULEZ non-compliant vehicles (disposed of/sold) – Inner London

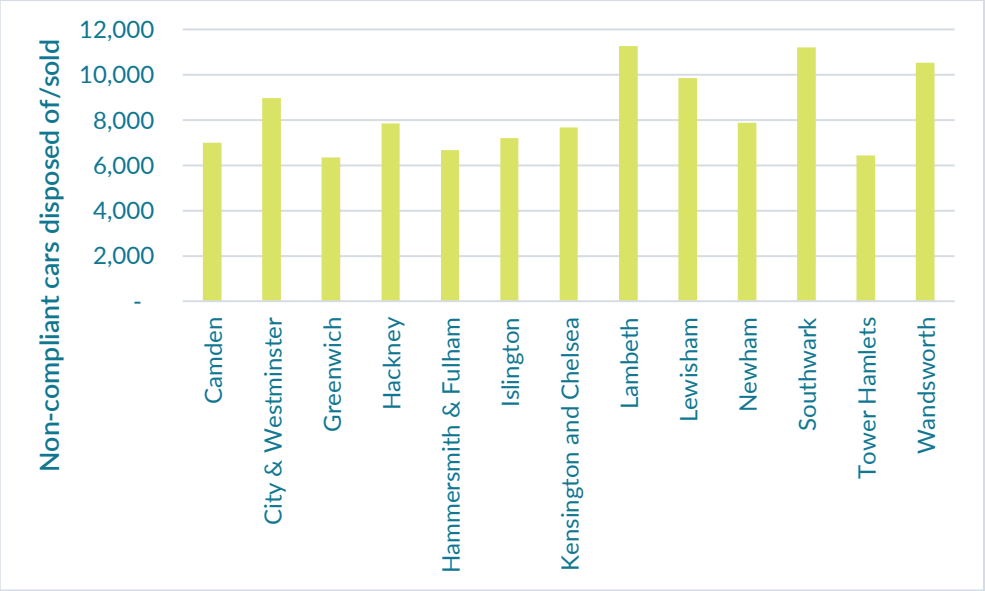
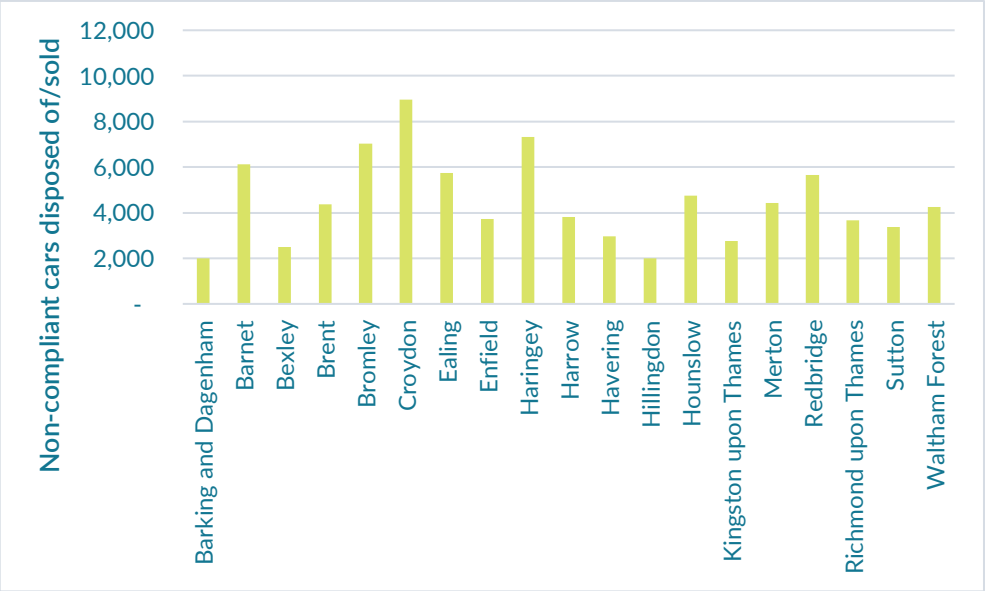


Figure 4.10: Reduction in ULEZ non-compliant vehicles (disposed of/sold) – Outer London



Reduction in carbon emissions

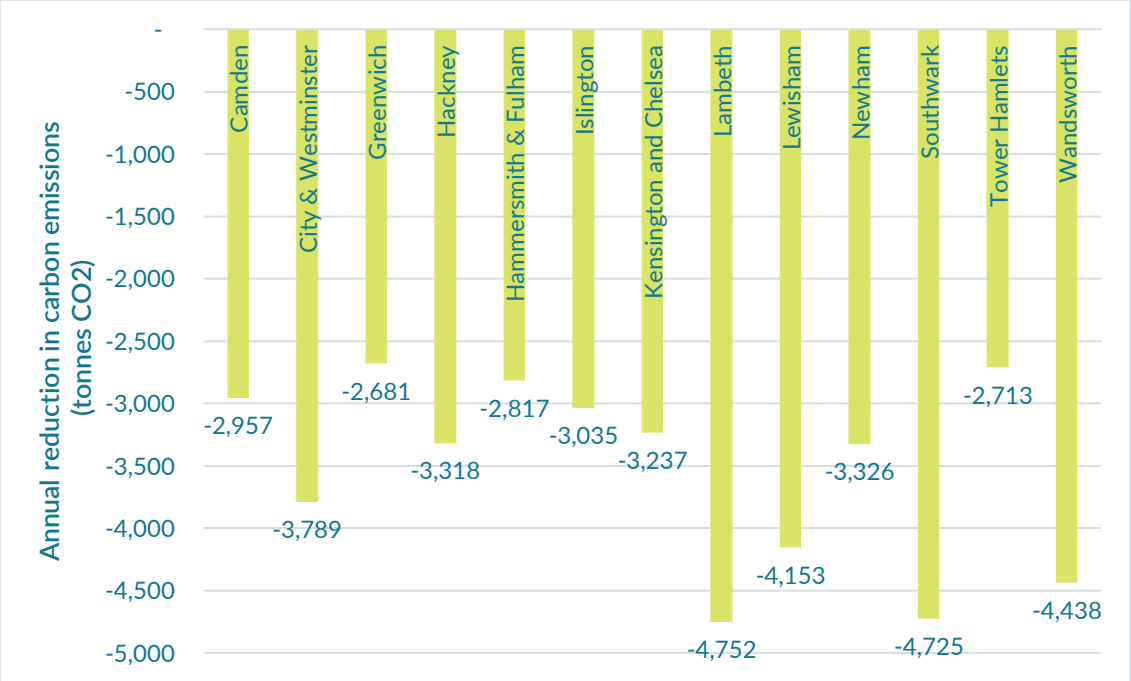
Car club members drive fewer miles. Growing car club provision can help reduce carbon emissions produced by Londoners' car travel by over 82,000 tonnes per year.

4.19 Car club users travel less miles by cars compared to private vehicle owners. Using data on annual reductions in vehicle miles travelled by an average car club user from the London Car Club Annual Survey published by CoMoUK (2017/18)[14] we have calculated annual reductions in vehicle miles travelled by switchable households will be 341 million miles, out of which 191 million fewer miles will be travelled by Inner London residents and 150 million fewer miles will be travelled by Outer London residents.

4.20 Using latest data from a SMMT study[15] that suggests an average car in use emitted 149.6g of CO_2 per km (241g/mile), we estimated that approximately 82,000 tonnes of CO_2 emissions can be saved annually in Greater London, with savings of 46,000 tonnes of CO_2 in Inner London and 36,000 tonnes of CO_2 in Outer London.

4.21 The potential reduction in carbon emissions is shown in Figure 4.11 and Figure 4.12.

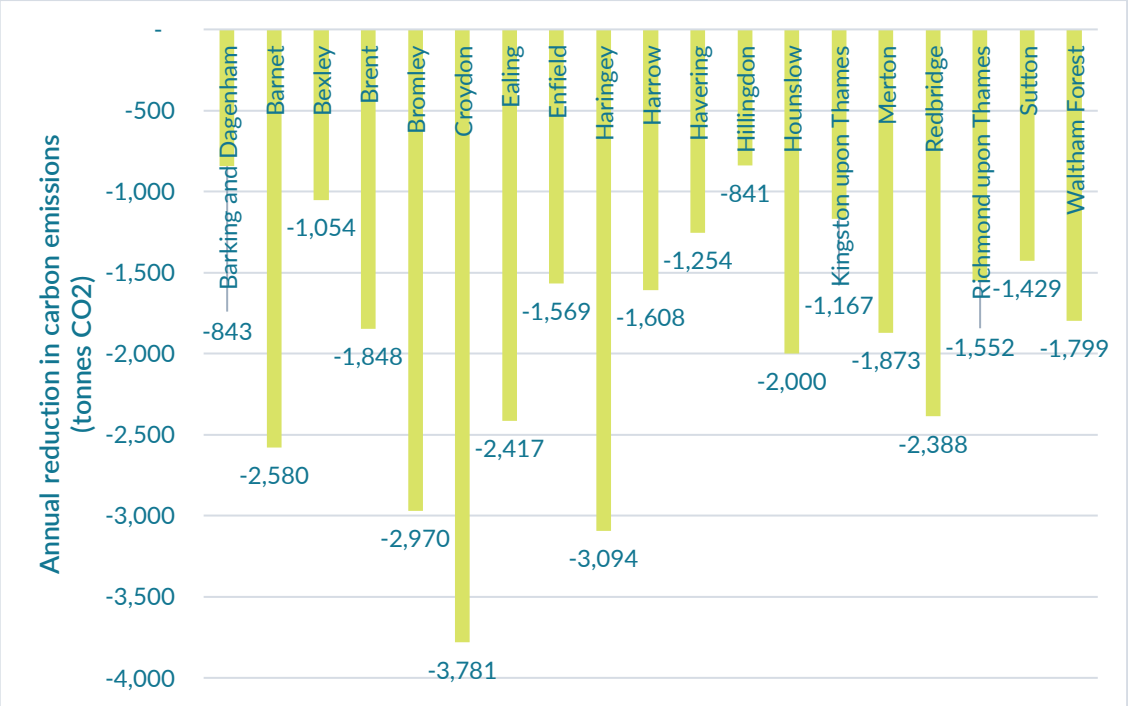
Figure 4.11: Annual reduction in carbon emissions – Inner London



[14] Data from 2019/20 survey is not used due to travel restrictions from Covid-19

[15] https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-New-Car-Co2-Report-2018-artwork.pdf

Figure 4.12: Annual reduction in carbon emissions – Outer London



5 Conclusion

Despite their current positive delivery on MTS goals, car clubs in London are yet to be able to deliver on their full potential. The analysis and recommendations we lay out in this report aim to demonstrate what that gap is, and how to close it. We contend that there are missing pieces of the policy jigsaw which, were they put in place, would unlock significant private car removal, decarbonisation, air quality, public transport use and activity level benefits.

In conclusion, London stands at a tipping point. With its travel patterns changed by the pandemic and the climate crisis hastening, it must re-examine its relationship with the private car. It may be a perceptual paradox that it can in part do this by embracing the shared car, but the evidence is clear that this is in fact the case. London's transport policy needs to turn a corner on car sharing, and it will reap the greatest sustainability dividends by doing so speedily.

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at **www.como.org.uk**

Registered office:
19 Cookridge Street,
Leeds LS2 3AG

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