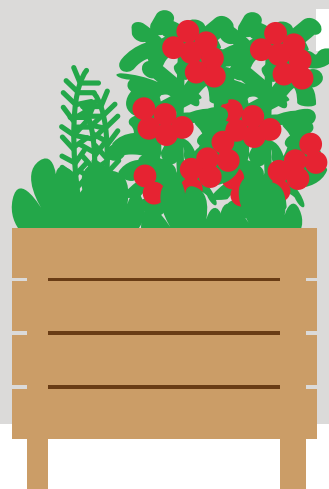


Electric Vehicle Plan



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Vision for Electric Vehicles

The most impactful car journey is the one that isn't taken. In 2030 Southwark will be a clean, green and safe borough with fewer cars. Most journeys will be made by walking, cycling and public transport.

Some people might still need the support of a car to get around and make journeys. Most of these journeys will be made by an electric vehicle rather than a petrol or diesel vehicle. These journeys will be supported by an established electric vehicle charging network. It will be accessible in all parts

of the borough, both on-streets and in estates. The charging network will be fairly priced, accessible and cater for the different charging needs of cars, taxis and freight. It will not impact on or limit the majority of people who walk, cycle and use public transport for everyday journeys.



Delivering a new plan

In July 2023 Southwark adopted its Streets for People Strategy, setting out how we plan to transform transport in the borough by 2030. Central to Streets for People is recognising that whilst a minority of people drive in the borough, our streets are largely designed for driving and are subsequently dominated by motor vehicles. Our Streets for People strategy commits us to better using our streets to support the needs of all our residents and visitors, by creating more space for community interaction, for journeys, to support local businesses and enhance nature.

The majority of residents in the borough do not own a motor vehicle and the vision of Streets for People is to reduce the proportion of journeys by car further, from 21% to 13% by 2030, this will contribute to the Mayor's target of reducing overall traffic by 27% by the same date. The aim is also to reduce the number of vehicles owned by 10% by 2030, with an increased car club offer to support lower car ownership while still providing access to a vehicle. Those remaining vehicles should be driven less and be electric wherever possible; to reduce transport emissions is a key contributor to the council's Climate Change targets.

Whilst this plan focuses on electric vehicle (EV) infrastructure, we recognise that increasing walking, cycling and public transport in Southwark remains the key priority.

Where active travel, micro mobility and public transport are not possible, we would like to support residents and businesses to electrify their fleets, whilst also looking to green our own fleet. The council also recognises that essential fleets, such as emergency services vehicles, may make slower progress towards lower emission vehicles.

Resident and business requests for EV charge points have grown with the introduction of the Ultra Low Emission Zone and as the public has become more aware of the harmful effects of the pollution caused by internal combustion engine vehicles.

We have developed this new plan to set out how we will make Southwark a borough which can respond to the increasing demand for EV infrastructure for those essential journeys, where no travel alternatives exist. Following consultation as part of Streets for People a delivery plan of how this EV Plan will be implemented will be developed in 2024.

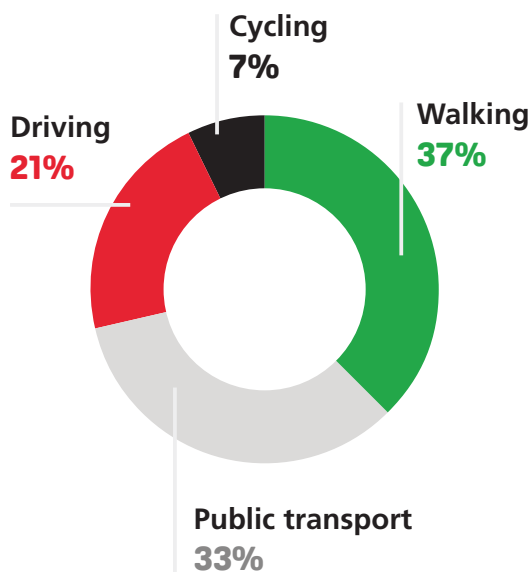
The plan is separated into three parts to reflect the experience of EV users:

EV Charging at home

EV Charging at your destination

A Growing Network

Southwark transport mode share



Source: Transport for London, London Travel Demand Survey 2017/18 – 2019/20 Available at: <https://tfl.gov.uk/corporate/publications-and-reports/travel-in-london-reports>



The opportunities and the challenges

The increase in EV ownership in the borough presents a number of opportunities and challenges in supporting the council in meeting the aims and objectives of Streets for People. While there is recognised benefit, the transition to EV is a complex picture.

Opportunities:

- EVs offer a move away from the over-reliance on polluting petrol and diesel vehicles as they take their power from the national grid, which is slowly becoming cleaner and more sustainable
- Emissions from the tailpipe of EVs are removed, reducing nitrous oxide and carbon dioxide locally in the atmosphere and improving air quality
- EV journeys tend to be shorter as drivers recharge their vehicles at their workplace or close to home
- Once purchased, EVs are currently cheaper to run and offer a cost saving against petrol and diesel equivalents.

Challenges:

- An EV is currently more costly than a petrol or diesel equivalent and often not affordable. We need to be careful not to only benefit residents who have the income to afford to make the change to an EV.
- An EV is as dangerous as a petrol or diesel vehicle, which does not help us reduce and stop people being killed or seriously injured on our streets to achieve our Vision Zero goal
- We need to avoid simply swapping petrol and diesel vehicles for EVs as we will still have the same congestion and parking pressure, without any extra space to increase and improve walking, cycling and community spaces on our streets
- It is likely there will be increasing emissions of more toxic pollution from brake and tyre wear as EVs are often heavier than petrol and diesel vehicles. This contributes to poorer air quality and impacts people's health
- The creation of an EV battery is an incredibly resource and pollution intensive activity. It requires mining a number of raw materials such as cobalt and lithium, which has a high environmental impact. Battery disposal also creates a number of challenges, with limited options for reuse or recycling at present
- The weight of batteries, and therefore EVs, can increase the wear and tear on our streets, increasing potholes and highway maintenance costs
- The ability of electricity generation and the grid to meet our demand for all our future energy needs for homes, businesses and transport is already under pressure, with planned upgrades often taking many years. EVs place an additional burden on the power grid



Expanding EV in the borough

To support residents and businesses to electrify their fleets, we have identified five core principles as we look to expand EV infrastructure across the borough, ensuring it aligns with Southwark council’s broader vision and goals.

Key Principles

The EV Plan’s principles are as follows:

- **Mode Shift:** Southwark Council will continue to prioritise projects that reduce car ownership and encourage greater use of active and sustainable modes of travel. Fleet electrification (e.g. EVs and EV infrastructure) plays a secondary role to sustainable mode shift. This supports our Streets for People approach to journeys, where we will improve road safety and make walking, cycling and wheeling easier.
- **Accessibility:** Ensuring the EV infrastructure roll-out is accessible to all. This includes ensuring that infrastructure does not impede access or use of the footway, for example to wheelchair or pushchair users in line with the Streets for Communities objectives of providing good quality public space that is accessible to all.
- **Inclusion:** Developing an approach to EV and EV infrastructure roll-out that is inclusive to all regardless of income, ethnicity, gender and mobility. This includes supporting the equitable provision of EV infrastructure across all neighbourhoods in the borough.
- **Flexibility:** Ensuring that the EV roll-out supports the future flexible use of space. For instance, it does not impede future design of the street that may include pocket parks, cycle lanes or new pedestrian spaces.
- **Future proofing:** EV and EV infrastructure technology continues to rapidly evolve as does the provision of energy more widely, we will consider new and emerging technology as we develop the Plan.

Standard and Rapid Chargepoints

The definition of standard and rapid chargepoints used within the Plan are:

- **Standard Chargepoints:** These usually have slower charging speeds as they are less powerful and are therefore used for overnight charging. They come in range: Slow (3.7kW), Standard (7.4kW) and Fast (11– 22kW).
- **Rapid Chargepoints:** These are more powerful chargepoints and charge EVs a lot quicker, sometimes fully within an hour. These can be Rapid (20 – 43kW) up to Ultra-Rapid (up to 350kW).



What we have done

The council commissioned energy and transport consultant City Science to help develop the EV Plan. A document summarising some of the key outputs from their detailed piece of research serves as an appendix to this summary. City Science considered, amongst other things; existing policy at a borough, local and national level, current EV charging provision, existing EV ownership and predicted growth in demand plus a range of financial models for future delivery.

Policy & Strategy Landscape

To ensure the EV Plan aligns with the wider policy landscape, over 25 policies, strategies and documents were reviewed as part of the baselining process. The review highlighted that at a national, regional and local level there is a clear commitment to a net zero future, and an emphasis on accelerating the transition to EVs.

As a council, we declared a climate emergency in 2019, stating our ambition for a carbon neutral borough by 2030. At a borough level, the council Delivery Plan sets out our priorities for 2022-26, including commitments to develop a borough-wide EV infrastructure Strategy by 2023 and delivering 1,000 EV chargepoints by 2026. Reducing emissions from vehicles is a key priority, with road transport accounting for 22% of all emissions in the borough.

While this EV Plan is part of Streets for People, it must also align with a series of broader emerging documents, including the Walking Plan, Cycling Plan, Climate & Environmental Supplementary Planning Document and Fleet Management Strategy. The council's local plan, Southwark Plan (2022), has planning policies that define the type of transport and parking that is required from new development in the borough. New developments are generally car free, but EV charging points have to be provided where on-site parking is permitted. Our commitment as a council remains fewer cars, driving less, with more of those vehicles that remain being EV.

Southwark currently hosts

1,677 EV chargepoints,

1,651 standard and **26** rapid

Existing Chargepoint Provision

Southwark currently host 1,677 EV chargepoints, 1,651 standard and 26 rapid. This infrastructure is primarily operated by two chargepoint operators (CPOs), Charg.y and BP Pulse, who run approximately 87% of standard and 78.5% of rapid chargepoints respectively. Standard chargepoints dominate provision and are evenly distributed, although a key gap exists to the south (around Dulwich). This could partly be due to the high levels of green space and parks, as well as the impact of large private landowners in the area which has limited the council's opportunity to install EV chargepoints to date. In contrast, the majority of the borough lacks rapid infrastructure, with most rapid chargepoints present in the north, around the London Bridge and Bermondsey area.

Chargepoint Usage

City Science identified key differences in usage patterns between standard and rapid chargepoints which relates to how they meet the needs of different types of users. Standard chargepoints are predominantly used by households, with usage increasing throughout the day and peaking in the early evening and increasing over the weekend. In contrast, rapid chargepoints are predominantly used by commercial fleets, such as taxis and private hire vehicles, with increased usage from Thursday to Saturday and between 09:00 and 21:00. Both types of chargepoints are reasonably well used, with usage rates of approximately 17-21% for standard and 8-10% for rapid chargepoints.

EV Charging at home

Ensuring quick and easy access to home EV charging for all borough residents, no matter their type of housing, will be a key priority for the council.

Access to charging varies greatly subject to the ability of residents to park off-street adjacent to their home, in a driveway, or for those who park on their street or nearby.



Objective 1: Making on-street charging accessible

While the council will continue to prioritise walking, cycling and public transport use, it is also important to ensure that EV charging, when installed, is balanced across the borough. We therefore want to ensure that the council’s lamp column charging programme delivers an equitable distance for residents to their nearest chargepoint. Initially this will centre on ensuring residents have no more than a 5 minute walk to a standard publicly accessible chargepoint.

In 2021, 92% of the properties in the borough were likely to have no off-street parking. The vast majority of housing within the borough consists of flats and terraced housing, where we would expect residents to be dependent on on-street charging through the public charging network (ONS, 2023).

The analysis from City Science indicates that the majority of the borough (approximately 73%) can

currently access a chargepoint within a 5-minute walk, however noticeable gaps include Dulwich Village and Dulwich Upper Wood, likely due to the high levels of recreational areas and private estate. This is paired with pockets of inaccessibility across Nunhead, Rotherhithe, Walworth and North Dulwich. Once these gaps are closed, any future roll-out will look to reduce the walking time further.

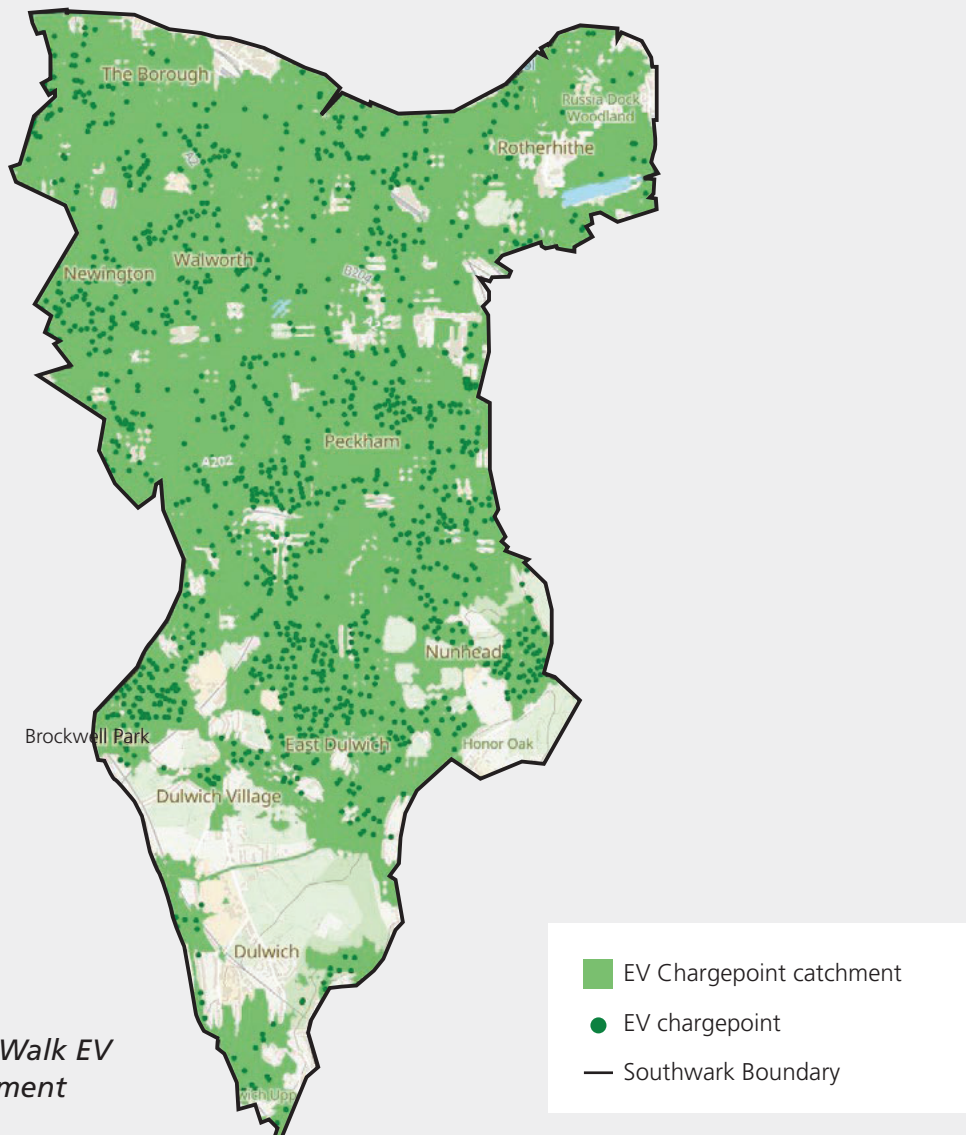


Figure 1: 5-minute Walk EV Chargepoint Catchment

It is the council's aim to introduce EV only bays alongside EV chargepoints. A frequent complaint received from residents who own EV vehicles is that chargepoints are blocked and inaccessible due to non-EV vehicles being parked adjacent.

Enforcement of EV bays could help maximise use of the existing chargepoints, and help ensure that new chargepoints are installed to help meet the areas of greatest need. It is essential that lessons learnt are used to inform and improve the successful roll out of this trial.

Charging cables that enable EVs parked on-street to be charged from home by crossing the pavement are unlawful and considered an obstruction. The 1980 Highways Act makes it illegal to place wires or cables across, or over, a public highway (including footways) due to the risk of trips and falls. In addition to the risk of trips, there are serious safety risks regarding private electrical wires trailing over the Highway that the council would have no control over. In line with the council's Streets for Communities principles, reclaiming space to make it accessible for our communities to connect, socialise and play, in a safe and pleasant environment is a priority.

In addition, the council considers applications for dropped kerbs and removal of front gardens for paved areas in line with the strict requirements of the council's Streetscape Design Manual, which strives to improve the quality of streets and spaces in the borough.

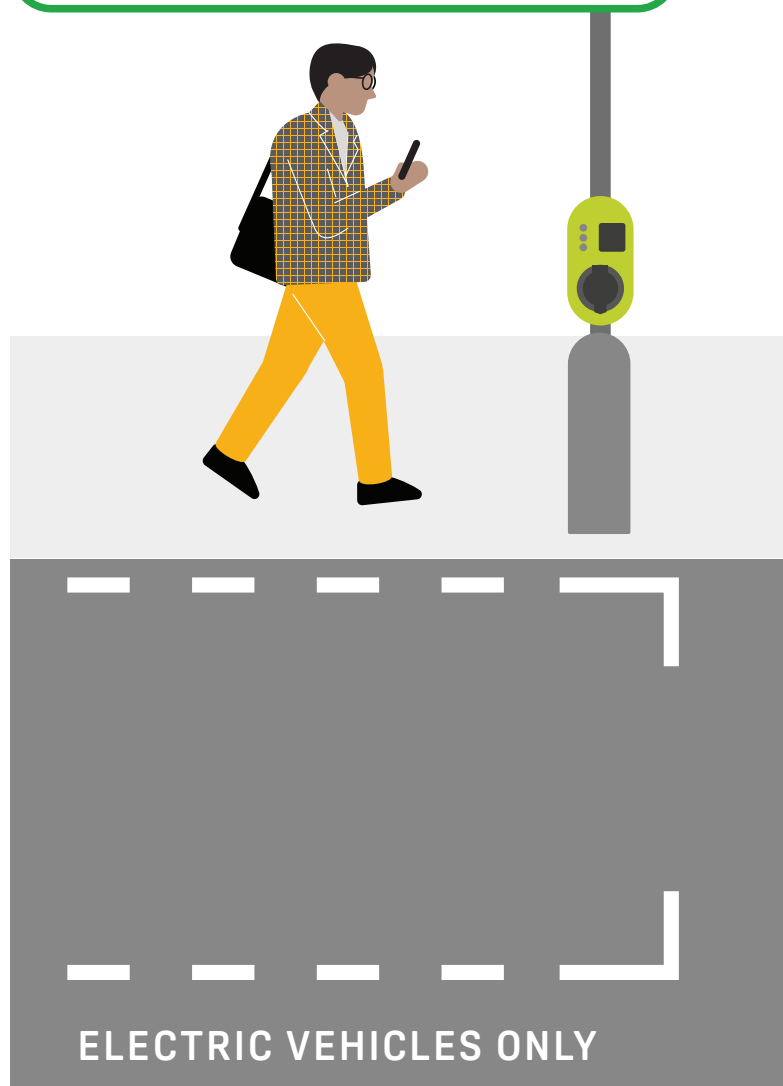
The council continues to roll out the lamp column charging programme and we will continue to review emerging technologies and methods and engage on the matter at a London wide and national level.

At the end of 2022, there were 5,100 motorcycles registered in Southwark, reflecting 8% of total registered vehicles (DfT, 2023). Of these motorcycles, approximately 30% use other fuels (e.g. not petrol, diesel or hybrid), a figure we would expect to grow in upcoming years. EV motorcycle users should be a consideration of any future expansion to EV provision in the borough.

In 2021, only 8% of the borough's housing was made up of semi-detached or detached housing; housing types that are more likely to have access to off-street parking.

What we will do:

- 1.1 Ensure all residents are within a 5-minute walking distance from a public charge point by 2026.** The council will aim to reduce this walking distance when existing gaps in the charging network are filled.
- 1.2 Introduce and enforce EV bays** adjacent to EV chargepoints, trialling bay size and hours of operation, to help maximise use.
- 1.3 Review technology and methods that enable EVs parked on-street to be charged from homes** but in the meantime not endorse or permit such methods due to safety concerns.
- 1.4 Conduct feasibility assessments at existing solo motorcycle bays** across the borough to identify sites suitable for EV chargepoints in the future.



Objective 2: Extend Provision to Housing Estates

There are a number of ways the council can support chargepoint delivery on our land, both to fill remaining gaps in standard chargepoint provision, and to accelerate the delivery of rapid chargepoints. However, there is also a clear gap in provision on the council's housing land, with no existing provision of EV charging facilities.

Southwark Council is the largest local authority housing provider in London, with over 50,000 homes. This means the council's housing estates present a significant opportunity to support EV roll-out through the provision of chargepoints to residents.

In 2022 there were over 3,800 parking bays on our housing estates with over 10,000 parking permits issued. This highlights the potential to support chargepoint delivery on the council's housing estates as the transition to EVs take place.

The council's current E-form allows residents to request new chargepoints but does not account for existing provision or utilisation. The form will be updated to meet changing demand and prioritise areas of greatest need, across all properties in the borough.

What we will do:

2.1 Trial EV infrastructure at 20 housing estates across the borough by 2026.

2.2 Refresh the council's E-Form so that applications are reviewed against existing provision and **prioritised in areas of most need.**

Objective 3: Support EV chargepoints on private land

EV chargepoints on private land, including housing developments, offices and shopping centres are an important resource.

The number and type of chargepoints required in new developments is set by planning policy and secured through the planning process. The council sets its standards in the Southwark Plan (2022). It is recognised that private landowners have a key role to play in the provision of charging infrastructure, alongside council installed sites.

What we will do:

3.1 Continue to work with private landowners to survey the current provision and **increase the availability and choice of EV chargepoints** across the borough.

EV Charging at your destination

Objective 4: Extend rapid chargepoint provision across the borough

Rapid chargepoints are required by EV users to quickly charge their vehicles away from their homes, either at destinations or when on longer journeys.

The implementation of rapid chargepoints must be balanced with the Streets for People priority of encouraging visitors and freight journeys by sustainable means, such as walking and cycling. Our Streets for the Economy approach will prioritise the use of cargo bikes over goods vehicles where possible for example. As these chargepoints are more powerful and charge EVs quicker, these type of charge points are used while the driver waits.

The work undertaken by City Science shows that rapid chargepoints are currently limited within the borough compared with the forecasted need in 2023 (present day), 2026 and 2030.

Southwark hosts 26 rapid chargepoints that are concentrated in the north of the borough. This is not enough to meet anticipated demand of 118 rapid chargepoints by 2026, as shown in figure 2 below.

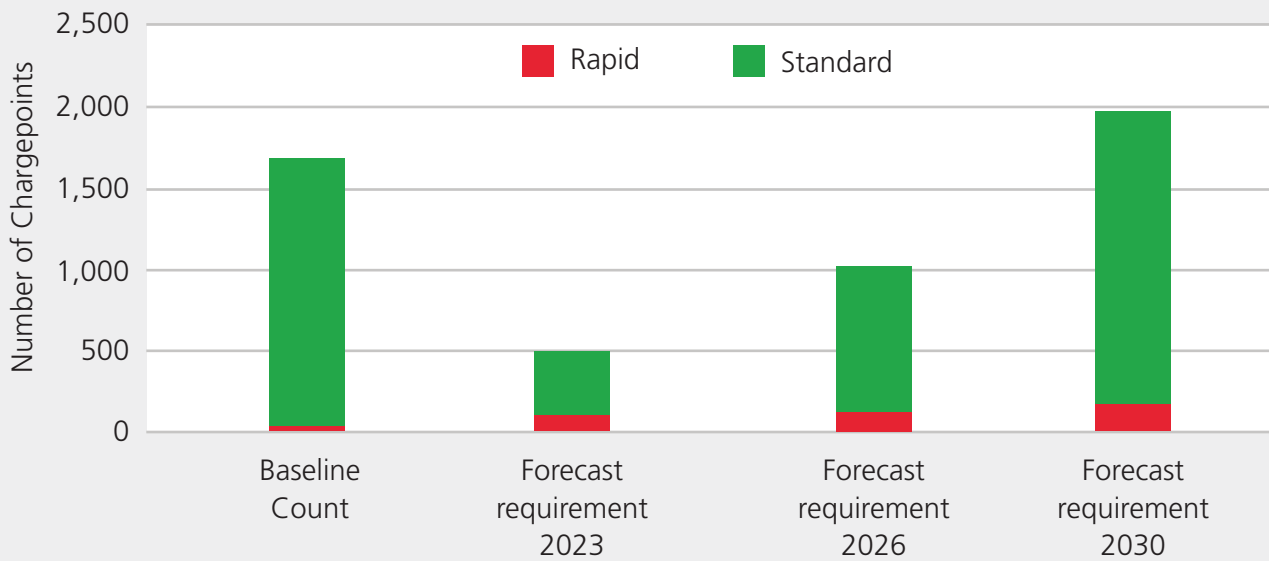


Figure 2: Current & Forecast Chargepoint Requirements (City Science, 2023)

What we will do:

- 4.1** Work with a diverse range of Chargepoint Operators (CPOs) to **accelerate rapid chargepoint delivery** across the borough.
- 4.2** **Deliver 40 rapid chargepoints by 2026**, with an aim to deliver a further 60 by 2030.
- 4.3** Work with neighbouring boroughs and UK Power Networks (UKPN) to **identify areas where electricity grid upgrades are required to help install rapid chargepoints**.

Objective 5: Explore EV chargepoints on council land

The council has the opportunity to explore the feasibility of increased EV provision at several sites it controls across the borough. The council currently operates two car parks at Peckham Town Centre and Choumert Grove. Both provide an opportunity to deploy a mix of rapid and standard infrastructure chargepoints on council-owned land.

Any exploration should take into consideration wider modal shift and other opportunities to use this space in the future through reducing the total number of car parking spaces on council land. Provision of EV charging must be balanced with the council's priority of encouraging visitors to town centres, parks and other destinations in the borough to travel by foot, bike and public transport where possible.

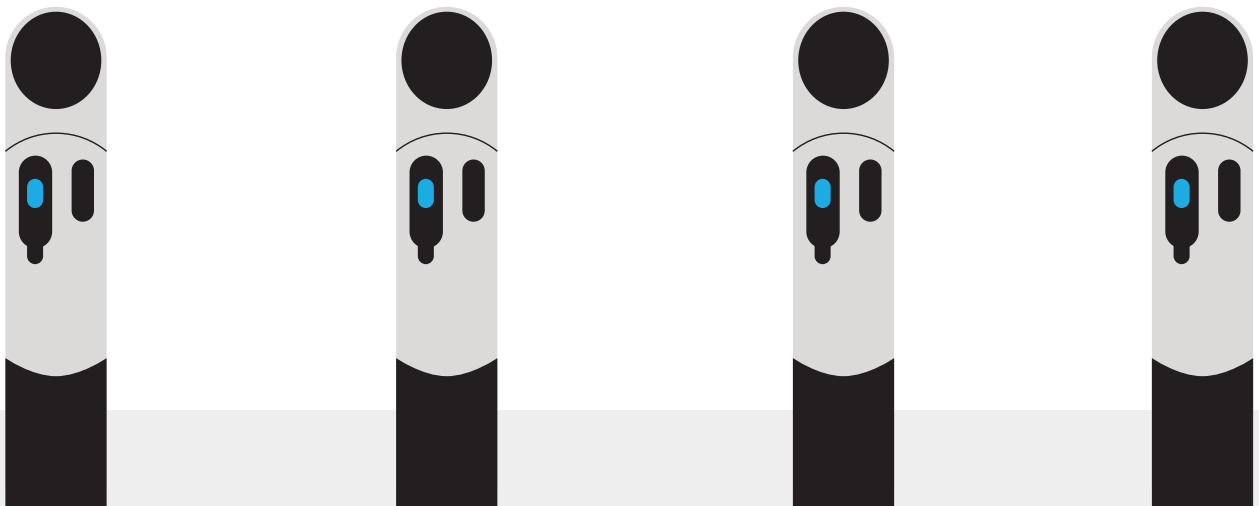
Alongside this, the council also operates six car parks at leisure facilities (including The Castle and Surrey Docks Water Sports). Two of these sites are reserved solely for blue badge holders. Delivery of chargepoints at leisure and park locations could help to increase equitable provision of EV chargepoints for disabled users across Southwark.

The council operates eight fleet depots with 15 chargepoints already in place to support its own fleet. The forthcoming Fleet Management Strategy will provide insight to support the decarbonisation of the council's fleet, including outlining next steps for developing the needed additional capacity in its depots. Other council sites with EV chargepoint potential include council office buildings such as 160 Tooley Street and Honor Oak crematorium.

What we will do:

- 5.1 Deliver chargepoints at council owned car parks** (2 sites), leisure facilities and parks.
- 5.2 Support delivery of a robust EV charging infrastructure** for our commercial fleet, as part of the council's Fleet Management Strategy.

The council operates **eight fleet depots with 15 chargepoints** already in place to support its own fleet's needs, but much more needs to be done.



A growing EV Network

Securing funding for a future network that serves the needs of residents, businesses and visitors to the borough is essential if we are to support the transition away from petrol and diesel vehicles.



Objective 6: Secure funding for the future

The UK Government currently provides two funding streams for standard chargepoints. These are the On-street Residential Chargepoint Scheme (ORCS) and the Local EV Infrastructure (LEVI) Fund.

- **ORCS:** Available to local authorities to part-fund the procurement and installation of chargepoints. £20m of funding has been announced for 2023/24 and is available for lamppost, car parks and street furniture chargepoints.
- **LEVI:** Supports local authorities in England to plan and deliver chargepoint infrastructure for residents without off-street parking, contributing to the costs of delivery and the employment of new staff through capital and capability funding streams.

To date the council has been awarded funding from these schemes to support the delivery of standard chargepoints across the borough. The Government has just announced a new round of LEVI funding, making £38m available to the London boroughs, split between £35m of capital and £3m of capability funding. Differing from the rest of the UK, funding in London will only be allocated through borough partnerships to drive scale, support a more equitable distribution of chargepoint infrastructure and to promote collaborative working. We will continue to explore opportunities for partnership and collaboration with other London boroughs to access this funding and any explore any future opportunities for alternative funding.

Two Chargepoint Operators (CPOs) run the majority of chargepoints within Southwark. Increasing the diversity of CPOs is likely to have a variety of benefits

such as providing a range of tariffs for the user and providing the opportunity to compare utilisation, reliability and revenue generation potential. The council will also work, where possible, to reduce the cost gap between home and on street charging.

What we will do:

- 6.1** Utilise ORCS and LEVI funding to **address gaps in the standard chargepoint network.**
- 6.2** Work with a diverse range of CPOs to **support choice and reduce cost** to users.



Objective 7: Explore sustainable funding models

The work undertaken by City Science demonstrates that a number of funding models exist to expand EV charging infrastructure in the borough.

- **Fully Funded:** 100% of costs are covered by CPO.
- **Match Funded:** costs are covered by two or more funding sources.
- **Joint Venture:** a shared funding agreement covers costs and income.

Whilst income from chargepoints is not a key driver for supporting EV infrastructure roll-out, it presents an opportunity to the council to fund improvements to active travel projects. Whilst income from standard chargepoints is modest (for example the current lamp column chargepoints could generate a total income of £42,120 p/a – based on an income of £30 per chargepoint for all Char.gy chargepoints) there is significantly more potential for income generation from rapid infrastructure. During development of the EV Strategy a fellow London borough indicated income potential from rapid sockets ranging between £3,000 - £4,000 p/a per site, whilst a CPO indicated income potential of up to £60,000 over 15 years for hub sites (clusters of three or more rapid chargepoints).

In order to meet our ambitious climate targets, it will be imperative that a commercial partnership considers the long term sustainability of any partner and the financial model. At no point should any subsidy be required that could impact on our ability to fund wider transport improvements in the borough that focus on our priorities of walking, cycling and public transport use.

What we will do:

7.1 Secure a sustainable future funding model that allows the council to expand provision, with a particular focus on filling the gap in rapid charging infrastructure.

7.2 Explore opportunities for income generation that allows funding to be redirected towards further expansion of EV infrastructure and supporting active travel measures.



