# Electric vehicle charging infrastructure
# London Living Streets briefing document

November, 2018

In the rush to keep up with and foster demand for electric vehicles (EV), London is letting bulky EV charging points (EVCPs) clutter its footways. These installations take up scarce space and make life even more difficult for pedestrians, especially visually impaired people, wheelchair users, and parents and carers pushing buggies.

London Living Streets represents the interests of London's pedestrians and campaigns for a high quality public realm. In this briefing document, we explore whether London's current and planned EV infrastructure provision is consistent with aims in the Mayor of London's *Transport Strategy* of:

- creating Healthy Streets that enable walking and are free of pavement clutter; and
- reducing the number of trips made by motor vehicle to 20% by 2041.

There are concerns that if we continue to plan our towns and cities around cars, they will continue to be dominated by them. We ask that Government, Transport for London (TfL), councils and infrastructure providers take a more forward-thinking approach so that EV infrastructure:

- supports, rather than hinders, the creation of safe, welcoming streets; and
- influences driving behaviour to reduce the number of vehicles on roads.

The time has come to plan for people and places, not cars.

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## Section 1: Current bad practice

For too long pedestrians have suffered the infrastructure associated with motor vehicles: road signs, posts displaying parking restrictions and payment machines for parking. EV charging units and their feeder pillars now add to this clutter, clogging footways even where there is spare capacity on the adjacent carriageway.

Figure 1: On Cowcross Street in Farringdon in LB Islington, this Source London charging unit and feeder pillar take up nearly one square metre of space on this busy street making the pavement less attractive to those walking. Cowcross Street was recently improved by the removal of clutter to the back of the pavement. But these actions have been undermined by the installation of the EVCP.


Figure 2: On Clermont Road in Hackney, charging points and the associated feeder pillar occupy an otherwise spacious pavement on a route popular with families accessing Victoria Park.

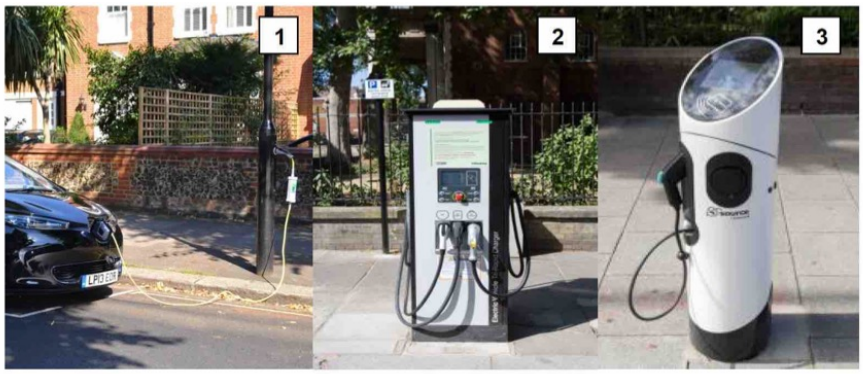


Figure 3, image 1 from Transport for London's latest location guidance (2017): Lamppost chargers have been presented as a solution to pavement clutter. But these installations use trailing cables, which are not only unattractive, but create trip hazards, particularly to children and people with visual impairments.

Figure 3, image 2: It is regrettable that TfL's guidance shows a bulky rapid charging unit installed on the footway. This type of installation is inappropriate. We ask that rapid chargers are always placed in off-street locations.

Figure 4: In this example on St Paul's Place in Islington, ECVPs are placed on the narrow footway despite there being plenty of space on the carriageway. The street is so wide that parking places are set at right angles to the kerb on one side, still leaving more than enough room for two large motor vehicles to pass.

Figure 5: Source London charge points on Battledean Road in Islington not only dominate the pavement but they disturb residents at night with their bright lights.

## Section 2: Policy context

Around half of Greater London's cars are currently parked on streets overnight. With so much on-street parking there has been a tendency in London to install slow EVCPs for private users on borough roads.

Electric vehicle charging points are classed as permitted development within highway land under the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) [1]. While the GDPO stipulates design limitations for the plinth and height of the units, it does not include guidance on protecting a minimum clear pedestrian space.

This should be provided via a borough's public realm guidance. Transport for London's *Streetscape Guidance* guides installations on the TRLN and influences borough-level guidance. Currently there is virtually no specific advice in this guidance on placement of EVCPs. The guidance also recommends a 2000mm preferred minimum clear footway width, an acceptable minimum of 1500mm, and an absolute minimum of 1000mm.

There is a risk that installations, such as those illustrated above, are in opposition to a number of existing national, regional and local government regulations and policies. These include:

- Equality Act 2010 that refers to providing a transport system that does not disadvantage particular groups of people;
- Department for Transport's *Inclusive Transport Strategy* (July 2018) that ensures disabled people travel confidently and easily;
- DfT's *Inclusive Mobility* best practice guidance that recommends a clear width of 2000mm on footways to allow two wheelchairs to pass one another comfortably;
- the *Mayor's Transport Strategy* and its aim for 20% of all trips to be made by car/taxi/PHV by 2041 (GLA, 2018);
- the Mayor's Healthy Streets approach and *Walking Action Plan*, which sets out to enable walking and make footways comfortable and free of pavement clutter; and
- NICE guidance on *Physical activity and the environment* (2018), which emphasises the need for accessible environments that enable everyone to be physically active.

Councils are reminded of the Ali vs Newham 2012 case that clarified the meaning of "due regard" under the Equality Act. This proved that this is not a mere tick-box exercise, but a robust inquiry before arriving at a decision. Failure to take account of the Equality Act could result in a judicial review.

[1] https://publications.parliament.uk/pa/cm201719/cmpublic/automated/memo/aevb22.htm

## Checklist for councils

We propose a checklist for councils when considering new EV infrastructure installations that could include the following points:

A. Consider the **Mayor's Transport Strategy** and its aims of road traffic reduction, Healthy Streets and Vision Zero.

B. Use a **hierarchy of EV charging locations** to prioritise Healthy Streets and active travel. 1. Off street as a priority 2. On the carriageway in well-designed build-outs 3. Pavement as last resort, ideally on lamp posts or if 2.5 metres of space remains. More detail in section 3.

C. Take into account the needs of **people with disabilities** and requirements of Equality Act 2010. Councils are reminded of the Ali vs Newham 2012: failure to take account of the Equality Act could result in a judicial review.

D. Consider **past improvements** and **future needs** of the public realm, including cycling infrastructure**.**

E. Undertake a thorough **consultation** and **assessment of need**. Consider the needs of the wider community, future technology and the long-term impact on the street.

We also ask:

- Government and TfL to provide clearer guidance and best practice to authorities to ensure EV charging infrastructure does not harm the safety and convenience of people walking and disabled people;
- local authorities to develop or amend public realm design guidance to ensure minimum standards for clear footways;
- local authorities to tighten consultation processes on charging infrastructure installations to ensure wider responses are considered;
- local authorities to rethink policies that promise charging points outside EV owners' homes (some councils appear to act on a "predict and provide" approach, providing charge points for new EV owners);
- Greater London Authority to expand the membership of its EV Infrastructure Taskforce to groups interested in pedestrian and disability interests and the protection of the public realm;
- EV Infrastructure Taskforce to consider how charging infrastructure can enable *a reduction* in the number of cars on our roads. This foresight is essential if London is to meet its goal for just 20% of all trips to be made by car/taxi/PHV by 2041.

## Section 3: Hierarchy of charging locations

We suggest that councils and TfL give priority to EVCP locations in the following order:

1. Off-street locations such as car parks, supermarkets, shopping centres
2. The carriageway
3. The footway if a 2.5 metre clear width remains

Off street

Pedestrians would suffer least if charging points are installed off-street. Locations could be found on land or under-used car parks at leisure centres, community facilities, shopping centres, train stations, or housing estates etc.

EV charging points at these locations should be provided via car clubs. Residents in Central and Inner London simply do not need to own their own cars anymore. With the right incentives – including good availability, a range of cars and accessories that also appeal to families, safe access, a package that costs less than owning a car – existing drivers would make the switch from private car ownership to off-street car clubs.

The outcomes of such a service could be transformative. It would reduce the number of cars parked on streets and free space for more cycle parking and lanes, seating, greenery and safer crossings. Car clubs also facilitate active travel by prompting users to justify the need for each car journey.

Some councils and EV infrastructure providers argue that residents will only switch to EV if cars can be parked and charged outside their houses. They also argue that on-street charging infrastructure serves as an advertisement for this newer, cleaner technology.

But these arguments come from a society still in thrall to the car. Just because people park outside their houses now, just because people *expect* cars to fill our streets, doesn't mean they must in the future[2]. In London, this expectation is also contrary to the adopted *Mayor's Transport Strategy* which clearly prioritises 'active' forms of travel (walking, cycling and public transport) over the use of private motor vehicles.

A careful, strategic approach to EV infrastructure provision offers an opportunity for cities to rethink, or disrupt, how people park and use cars. London must not let this opportunity pass by.

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[2] TfL customer research (conducted by Future Thinking) has shown that three quarters of EV users are already willing to walk up to 10 minutes to a charge point.

On carriageways

If off-street locations are unavailable, charge points should be installed on the carriageway. As detailed above, car clubs should gain priority access to these units in inner-city locations. Charging points (in all locations) should also charge electric cycles.

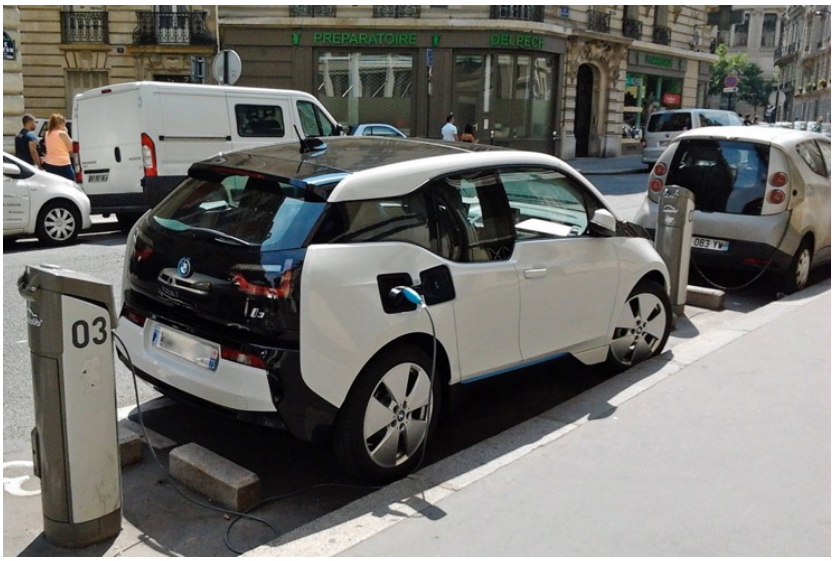

Figure 6: French car club operator, Autolib, has installed a number of carriageway charging points in Paris.

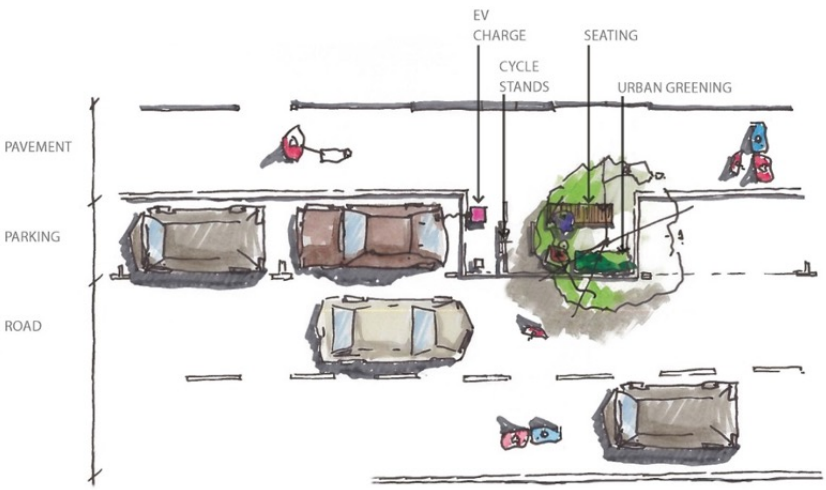


Figure 7: Susan Claris at Arup has designed a 'ReCharge Parklet' that transforms a parking bay into a space that combines EV and e-Bike charging facilities within a micro-park known as a 'parklet'. This concept is designed to be flexible adapting to the needs of a community – not just car owners -- over time. It also provides seating, urban greening, mobile phone charging, Wi-Fi, a bicycle stand and pump.

Infrastructure providers, that usually pay for the installation of EVCPs, have told us they couldn't budget for building additional features like parklets. But could councils fill the gap using the rental payment from infrastructure providers for the kerbside charge point, or Local Implementation Plan (LiP), Liveable Neighbourhoods or Section 106 funding?

Carriageway charging points must also complement cycling infrastructure and not be installed adjacent to existing or future cycling routes, such as on key corridors identified in TfL's Strategic Cycling Analysis.

On the pavement

Pavements should be the last resort for EVCPs. They should only be considered if 2.5 metres of clear space is left for social, family and utility walking. This basic minimum provision is recommended in *iWalk: Innovations in Inclusive Walking*, a research project by Bristol City Council and University of Bristol (2007).

Another option are lamp-post chargers that allow residents to charge from a converted lamp-post. These are not ideal due to trip hazards from the trailing cables between the lamp-post and car but should be preferred over charge points that take additional space on the footway. These have been trialled in Royal Borough of Kensington & Chelsea (RBKC) and have proven more flexible and easy to install than standalone charge points.

## Section 4: EVs are not a panacea

But even if charging points are installed in car parks or on the carriageway, we must consider whether EVs are a panacea for the public policy problems facing us in London and throughout the UK. Indeed, do they risk locking our towns and cities into another era of car domination?

Policy makers considering mass provision for EVs must keep the following points at the forefront of their minds:

- The electricity which powers EVs is not all generated by clean electricity.
- While electric vehicles emit no exhaust fumes, they still produce pollution from road, tyre and brake wear in the form of particulates.[3]
- Streets will still be dominated by electric motor vehicles and children unable to play or cycle in them.
- Electric vehicles are still dangerous which means pedestrian and cyclists will remain at risk of death and injury.
- If we replace all cars with electric versions, we will not solve the country's physical inactivity crisis or diseases associated with obesity and sedentary behaviour.
- Electric vehicles will contribute to the vast amounts of 'black top' which disfigures our public realm and contributes to flooding and pollution in our waterways.

Finally, there is a question of equity. Local, regional and national government support for EV charging infrastructure and the purchase of electric vehicles, including free parking and congestion charge exemption, is a large subsidy to the well-off who are buying them. The UK Government recently changed its Plug-In Car Grant so it would not apply to hybrid cars with a range of less than 70 zero emission miles. Buyers of pure electric cars still receive a £3,500 grant.

But even with grants, cars are expensive to buy new. A small, family, battery-electric-only car, for example, starts at £20,000.[4] According to the *Uptake of Ultra Low Emission Vehicles in the UK*, (DfT, 2015) "most private EV owners are currently middle-aged, male, well-educated, affluent, and live in urban areas with households containing two or more cars and with the ability to charge at home". This research also predicts that people in this or similar demographics will continue or start buying EVs in years to come[5].

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[3] We agree with the view of UK government advisor on air pollution, Professor Frank Kelly, that "cars must be driven out of cities to tackle the UK's air pollution crisis, not just replaced with electric vehicles," as reported in the Guardian, 4 August, 2017.

[4] https://www.nextgreencar.com/electric-cars/available-models/

[5] A report (2018) by the European Automobile Manufacturers' Association (ACEA) also reveals that 85% of all electric car sales are concentrated in six Western European countries with some of the

Meanwhile there are virtually no government subsidies to encourage individuals, families or businesses to buy electric bikes or cargo bikes[6], all of which would achieve government's ambition of reducing air pollution and congestion. To make matters more unfair, to give two examples, while EV drivers benefit from free parking in Islington, users of bike hangars pay more than £100 per year to park their bikes. In Wandsworth, the annual payment for EV drivers is the same as that for a single bike hangar space (£72).

If government is serious about reducing air pollution and improving the public's health, money would be better spent on protected cycle lanes, better street design including zebra crossings and safer junctions. Least expensive of all, councils could install a few strategically located bollards or planters to create Low Traffic Neighbourhoods where through-traffic is removed and streets returned to residents[7].

Given the substantial number of car-free households in London[8] and given the city's air pollution, road safety and congestion crisis, government at all levels must reconsider *all* policies, regulations and practices to ensure a shift to walking and cycling.

highest GDPs. By contrast, the market share of EVs is practically 0% in countries with a GDP per capita below €18,000.

[6] Government announced in September 2018 £2 million funding to support the uptake of e-cargo bikes. By contrast, government has already invested more than £500 million into subsidies for the purchase of ultra low emission vehicles and recently announced an additional £100 million to continue the Plug-In Car Grant until 2020.

[7] For more information, refer to Living Streets & London Cycling Campaign's guides to Low Traffic Neighbourhoods. https://londonlivingstreets.com/low-traffic-neighbourhoods-two-new-guides/

[8] 2011 Census data shows that a majority of households in Inner London don't own a car.

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