Electric vehicle charging infrastructure
London Living Streets briefing document

March, 2019

In the rush to 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 more difficult for pedestrians, especially those with visual impairments, 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 argue that plans for EV infrastructure must be consistent with the Mayor of London's *Transport Strategy* and its aims of:

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

We call on London boroughs and TfL to prioritise EVCP locations (for slow and rapid charging) in the following order:

1. **Off-street** charging should be a priority for both slow and rapid charging. EVCPs should be prioritised for EV car clubs.
2. If off-street locations are unavailable, EVCPs should be installed on the **carriageway** in well-designed build outs.
3. The **footway is the last resort** and only considered for EVCPs if 2.5m of clear space is left for social, family and utility walking.

If we continue to plan our towns and cities around cars, they will continue to be dominated by them. Government, Transport for London (TfL), councils and infrastructure providers must take a forward-thinking approach so that EV infrastructure supports the creation of safe, welcoming streets and influences driving behaviour to reduce the number of vehicles on roads.

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

- Equality Act 2010 refers to providing a transport system that does not disadvantage particular groups of people[1];
- Department for Transport's (DfT) *Inclusive Transport Strategy* (July 2018) ensures disabled people travel confidently and easily;
- DfT's *Inclusive Mobility* best practice guidance recommends a clear width of 2.5m on footways to allow two wheelchairs to pass one another comfortably;
- the *Mayor's Transport Strategy* and its aim for 80% of all trips to be made by walking, cycling or public transport by 2041 (GLA, 2018) – current plans for EV infrastructure assume people will continue to own private vehicles and park outside their homes;
- the Mayor's Healthy Streets approach and *Walking Action Plan*, which aim to enable walking and make footways comfortable and free of clutter;
- the Mayor's Vision Zero to eliminate all deaths and serious injury on London's roads by 2041, in part by reducing the dominance of motor vehicles and encouraging safer walking by reducing street clutter and widening footways;
- NICE guidance on *Physical activity and the environment* (2018), which emphasises the need for accessible environments that enable everyone to be physically active.

[1] Councils are reminded of the Ali vs Newham 2012 case that clarified the meaning of "due regard" under the Equality Act. This proved it 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.

EV Infrastructure Checklist

Councils should set out a policy for slow and rapid EV charging infrastructure, as a number have already done. The policy should follow the EV Infrastructure Checklist, in draft below:

A. Ensure the provision of charging infrastructure fits with the **Mayor's Transport Strategy** and its aims of Healthy Streets free of pavement clutter; road traffic reduction and reduced car ownership; and Vision Zero[2].

B. Use a **hierarchy of EVCP locations** to prioritise Healthy Streets and active travel.
1. Off street – the preference is to install slow and rapid EVCPs in car parks or other off-street locations. EVCPs at these locations must be prioritised for EV car clubs.
2. Carriageway– where on-street EVCPs are essential, install them on the carriageway in well-designed buildouts. These should replace and not exceed the space of existing car parking bays. Buildouts should not compromise safety of existing/proposed cycle routes.
3. Footways should be the last resort and only if the installation allows **2.5m of clear footway space** and the footway to achieve a Pedestrian Comfort Level[3] score of no less than B+. The EVCP should be at least 450mm from the kerb edge, but this is not included in the clear footway width.

C. Take into account the needs of **people with disabilities** -- particularly those with sight impairments and mobility impairments -- and the requirements of Equality Act 2010[4]. EVCPs should not be placed on pavements unless there is 2.5m to allow two wheelchairs to pass one another comfortably.

D. If on-street charging is essential, scrutinise the **suitability of the site**. Review planning proposals for the area considered; undertake an Equality Impact Assessment; a survey of flood risk, fire risk, trees, network impact and land ownership; and consider the impact in conservation areas or outside listed buildings. Do not install EVCPs where new cycling, walking or public realm improvements are proposed or planned. Do not replace loading or disabled parking bays.

E. Undertake an **assessment of need**. Do not install EVCPs at the request of one or two EV owners but consider the needs of, and accessibility to, the whole community; consider provision in the context of London's declining car ownership; how soon the infrastructure could be out of date; and the long-term impact on the street.

F. Undertake a thorough **consultation** of proposed locations for EVCPs with the Highway Authority, residents and local interest groups. Place on the council website and inform relevant stakeholders.

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[2] The *Mayor's Transport Strategy* aims to reduce the number of trips made by motor vehicle to 20% by 2041; create Healthy Streets that are welcoming and free of clutter; and eliminate deaths and serious injury on London's roads, in part by reducing the dominance of vehicles and encouraging safer walking through reduced street clutter and wider footways.

[3] http://content.tfl.gov.uk/pedestrian-comfort-guidance-technical-guide.pdf

[4] Councils are reminded of the Ali vs Newham 2012 case that clarified the meaning of "due regard" under the Equality Act. This proved it this is not a 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.

Hierarchy of charging locations

1. Off street

Locations could be found in 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**. 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.

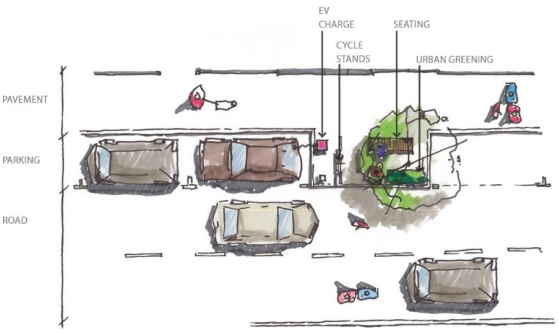
The outcomes of such a service could be transformative. It would reduce the number of cars parked on streets and free space for more cycle parking and lanes, seating, greenery and safer crossings. Car clubs also facilitate more active travel by prompting users to justify the need for each car journey.

Some argue that residents will only switch to EV if cars are 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[5]. 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.

On carriageways

If off-street locations are unavailable, charge points should be installed on the carriageway in well-designed build outs. A number of carriageway charge points are being installed across London (see below left).



[5] 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.

Car clubs should gain priority access to these units. Charging points (in all locations) should also charge electric cycles.

Build-outs can also improve the amenity and appearance of the street. Susan Claris at Arup has designed a '**ReCharge Parklet**' (above right) that transforms a parking bay into a space that combines EV and e-Bike charging facilities within a micro-park known as a 'parklet'. With its greenery, seating and services such as mobile phone charging and Wi-Fi, this concept is attractive to the entire community, not just car owners. It is also designed to be flexible, adapting to technology and needs of the community over time.

If infrastructure providers (that usually pay for the installation of EVCPs) cannot budget for a parklet, councils could fill the gap using the rental payment from infrastructure providers for the kerbside charge point, or Local Implementation Plan (LiP), Liveable Neighbourhoods, Community Infrastructure Levy 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 or where public realm improvements have been made or are likely to be proposed.

<u>On the pavement</u>

The footway should only be considered for EVCPs if two metres of clear space is left for social, family and utility walking as recommended in DfT's *Inclusive Mobility* best practice guidance.

Lamp-post chargers, that allow residents to charge from a converted lamp post, have been presented as way to reduce pavement clutter. These are also more flexible and easy to install than standalone charge points. But councils are reminded that the trailing cables are still unattractive and create trip hazards for pedestrians.

<u>EVs are not a panacea</u>

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.[6]
- Streets will still be dominated by electric motor vehicles and children unable to play or cycle in them.

[6] 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.

- Electric vehicles are still dangerous and 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.

Buyers of pure electric cars receive a £3,500 government grant. But even with this, EVs are expensive to buy new. A small, family, battery-electric-only car, for example, starts at £20,000.[7] 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.

Meanwhile there are virtually no government subsidies to encourage individuals, families or businesses to buy electric bikes or cargo bikes[8], 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 investing in protected cycle lanes and 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[9].

Given the substantial number of car-free households in London[10] 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.

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

[8] 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.

[9] 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/

[10] 2011 Census data shows that a majority of households in Inner London don't own a car.

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