
Decision Maker: ENVIRONMENT AND COMMUNITY SERVICES PORTFOLIO
HOLDER

Date: Wednesday 17 November 2021

Decision Type: Non-Urgent Executive Key

Title: LBB ELECTRIC VEHICLE CHARGING STRATEGY

Contact Officer: Amy Mallett, Carbon Management Graduate Intern
Amy.Mallett@bromley.gov.uk
Dan Beckett, Transport Planner, Dan.Beckett@bromley.gov.uk

Chief Officer: Director of Environment and Public Protection

Ward: All Wards;

1. Reason for report

1.1. This report details the need for a Council-wide Electric Vehicle (EV) Charging Strategy to guide the installation of charging infrastructure in Bromley. This is to support LBB's organisational objectives and a borough-wide transition to low or zero emissions vehicles before the 2030 ban on the sale of new petrol and diesel cars and vans.

2. RECOMMENDATION(S)

That the ECS PDS:

- 2.1. Provide commentary, and that the Portfolio Holder gives approval for, the adoption of the draft strategy (see Appendix 1 - EV Strategy).
- 2.2. Note commentary on page 9 of the strategy and section 3 of this report, for the Portfolio Holder to give approval for Officers to design a 'Pilot Residential Chargepoint Project'
- 2.3. For authority to progress with 'Gully Charging' as one aspect of the pilot.
- 2.4. Subject to ECS PDS feedback on the draft strategy and this report, full details of the proposed pilot will be reported to ECS PDS committee in January or March 2022.

Impact on Vulnerable Adults and Children

1. Summary of Impact: Positive impact on users of the highway in relation to air quality improvements.
-

Corporate Policy

1. Policy Status: New Policy: Building on existing policies in the Air Quality Action Plan; LBB's Net Zero Action Plan; Bromley Local Plan; New London Plan; Bromley's Third Local Implementation Plan (LIP); draft Open Space Strategy and the draft Digital Strategy.
 2. BBB Priority: Excellent Council Quality Environment Healthy Bromley
-

Financial

1. Cost of proposal: Not Applicable
 2. Ongoing costs: Not Applicable
 3. Budget head/performance centre: Traffic Planning & Strategy / Carbon Management Team
 4. Total current budget for this head: £293k
 5. Source of funding: Existing revenue budget 2021/22; future funding options TBD
-

Personnel

1. Number of staff (current and additional):
 2. If from existing staff resources, number of staff hours:
-

Legal

1. Legal Requirement: Non-Statutory - Government Guidance
 2. Call-in: Applicable
-

Procurement

1. Summary of Procurement Implications:
 - 1.1. If agreed, this report indicates there will be a future procurement for the installation of chargepoints across the borough.
 - 1.2. Any forthcoming procurement must be approved in accordance with the Council's Contract Procedure Rules.
 - 1.3. In accordance with Clause 3.5 of the Contract Procedure Rules, the Head of Procurement must be consulted regarding the use of any Framework. In accordance with CPR 2.1.2, Officers must take all necessary professional advice.
-

Customer Impact

1. Estimated number of users/beneficiaries (current and projected): Approval of the Electric Vehicle Charging Strategy will not only benefit the Council by fulfilling existing air quality and carbon reduction objectives, but will benefit the health of the wider-community through area-wide emissions reductions and improved connectivity for residents without off-street parking, in areas where private transport remains essential.
-

Ward Councillor Views

1. Have Ward Councillors been asked for comments? No
2. Summary of Ward Councillors comments: N/A

3. COMMENTARY

- 3.1. Within LBB, there are six different plans or strategies which make reference to the installation of electric vehicle (EV) charging infrastructure within the next few years. These focus on;
- An organisational transition to electric fleet;
 - Borough-wide electrification (though up until now this has only been to ensure new developments install EV chargepoints (CPs) according to the Local Plan, rather than retrofitting highways and existing car parks with CPs).
- 3.2. In October 2021, the Government's Net Zero Strategy committed a further £620million to support the EV transition, with a focus on the delivery of on-street residential charging infrastructure.
- 3.3. In November 2020 the UK government announced a ban to end the sale of new petrol and diesel cars and vans by 2030, with all new vehicles being required to have a significant zero emissions capability (e.g., plug-in and full hybrids) from 2030 and be 100% zero emissions from 2035.
- 3.4. At the end of 2020, there were 1,878 ultra-low emissions vehicles (ULEVs¹) registered in Bromley, a 46% increase in growth compared to 2019, despite COVID-19.
- 3.5. Accounting for the incoming ban, projections from our district network operator (DNO) suggest that in Bromley, by 2030 there could be;
- 67,000 battery electric vehicles (BEVs);
 - 13,000 plug in hybrids;
 - 6000 ULEV taxis and private hire vehicles;
 - 6000 ULEV vans;
 - and a limited number of electric motorcycles.
- 3.6. Research from the 'International Council on Clean Transportation' (ICCT), which complements the TFL² and the GLA's London Delivery Plan for EV charging infrastructure, suggest we need 711 public residential chargepoints (CPs) by 2025 and 1580 by 2030 in Bromley to cope with future demand.
- 3.7. Currently there are 76 publicly accessible CPs in Bromley (see table 1), according to the National Chargepoint Register, of which only 42 of these are on-street, or in public car parks. This is important, as 36% of households in Bromley do not have access to off-street parking, therefore cannot install CPs at their residence.

Location type	Slow	Fast	Rapid	Total
Public car park		19	2	21
On-street		20	1	21
Retail car park	1	10	2	13
Other	2	7		9
Service station			3	3
Dealership forecourt	1	2		3
Workplace car park		2		2
Leisure centre			2	2
Hotel / Accommodation			1	1
Park & Ride site		1		1
Total	4	61	11	76

Table 1. Total public chargepoints in Bromley. Data from the National Chargepoint Registry, 2021

¹ <https://www.vehicle-certification-agency.gov.uk/fuel-consumption-co2/fuel-consumption-guide/zero-and-ultra-low-emission-vehicles-ulevs/#topic-title>
² [London electric vehicle infrastructure delivery plan \(tfl.gov.uk\)](https://www.tfl.gov.uk/road-transport/low-carbon-transport/london-electric-vehicle-infrastructure-delivery-plan)

- 3.8. At the end of September 2021, resident requests for chargepoints stood at 81, with a noticeable increase in new requests being received every week. These are typically in those locations without off-street parking, where housing is terraced, or comprised of flats, and where there is no other legally viable option but to install CPs on the highway or in car parks.
- 3.9. To further illustrate EV take up in Bromley, Source/Bluepoint's August data shows that total charging time for 2021 already amounts to 85% of the total charging time for 2020. Total charging time for 2021 is therefore expected to exceed charging time for 2020.
- 3.10. Although local authorities are not yet statutorily obliged to install EV infrastructure, many local authorities, including Bromley, have EV targets for their own fleet, and have been involved in the procurement and/ or deployment of some public EV charging infrastructure.
- 3.11. Harmonising existing LBB EV targets into one document, and planning for the forecasted changes in EV demand requires an overarching strategy for the installation of chargepoints in Bromley. The strategy is divided into two discrete components: Workstream 1 (organisational transition) and Workstream 2 (borough-wide transition).
- 3.12. The approach to delivering EV charging infrastructure under Workstream 2 is particularly important, due to the impact charging infrastructure can have on the:
- Aesthetics of the streetscape;
 - Usage of the public highways;
 - Decarbonisation of transport in the borough;
 - Improvements in air quality;
 - Provision of a necessary, but accessible and competitively priced service to residents; and
 - Potential revenue generation for the Council, by facilitating installations on the highway or in Council-owned car parks.
- 3.13. The proposed approach to delivering charging infrastructure under workstream 2 is fourfold:
1. Step 1 - Demand forecasting and spatial planning: To inform step 2, 3, and 4, undertake data gathering on EV uptake and chargepoint demand forecasts circulated by reliable third parties; collation of resident requests for chargepoint (CP) installation; spatial planning and mapping, to consider locations where charging demand might be greatest i.e. priority streets³.
 2. Step 2 - Pilot Residential Chargepoint Project: To trial a variety of residential charging options between 3kW and 22kW.
 3. Step 3 - Further assessment of priority streets (in order of priority, high to low): To ascertain numbers of CPs required by street, siting opportunities, suitability of different options based on pilot outcomes.
 4. Step 4 - Detailed Infrastructure Delivery Plan: Using outcomes of step 1, 2 and 3, develop a detailed borough-wide delivery plan for the installation of charging infrastructure in Bromley. This will highlight the right balance of solutions and technologies to scale up the public charging network in Bromley, supporting the shift to sustainable transport. This will include timescales, costs and estimated revenue generation consistent with the Council's facilitatory role in supporting infrastructure delivery, as well as resident impact and area-wide carbon savings.

³ Priority locations are those which fulfil a number of important criteria. These include housing type and lack of off-street parking; links and proximity to our Air Quality Management Area (AQMA); geographical spread e.g., closeness to existing chargepoints; public transport accessibility levels (PTAL).

3.12 As part of Step 1 in the strategy development, LBB worked with impartial Government funded external consultants from the Energy Saving Trust, to undertake the spatial planning and mapping, resulting in the identification of 1109 priority streets in Bromley suitable for the installation of charging infrastructure (see Appendix 2 – Mapping Analysis). The suitable streets were determined by considering; proximity to existing CPs: areas with more than 70% terraced housing; locations within a six-minute walk of a resident request; and locations with low Public Transport Accessibility Level (PTAL) scores. An additional consideration was existing parking restrictions. Of these, 197 streets in the borough and 9 LBB-owned car parks are considered to be a high priority for installing public residential chargepoints, so should be targeted first for a phased approach to installation, with medium and low priority streets to follow.

Table 2. Priority streets for chargepoint installation, August 2021

Selection Criteria	Low Priority	Medium Priority	High Priority
On-street demand: more than 70% of the properties are either flats or terraced houses	✓	✓	✓
Resident requests: within a six-minute walk of a resident request.		✓	✓
Access to public transport: in an area with a lower PTAL score (0-4).			✓
Total number of streets	883	29	197

3.13. As the highway authority, LBB need to facilitate the phased installation of CPs in priority locations on the highway and in car parks, to ensure that these locations are EV compatible for residents, before the 2030 ban.

3.14. By 2030 all wards in Bromley will need to have facilitated the installation of charging infrastructure, some more than others. Awareness of this among Members, Officers and Residents is crucial in developing a sensible approach to the delivery of EV charging infrastructure, which works for all stakeholders. Following adoption of the strategy and review of the proposed pilot, a communications plan will be developed to accompany the adoption of any proposals.

Proposed Pilot Project

3.15. Expanding on the 2018 ECS PDS decision (Reference Report ES18010) to trial lamp column trickle chargepoints, this report proposes the design of a small pilot scheme trialling a variety of residential charging options between 3kW and 22kW (see Appendix 3 – Possible Charging Options).

3.16. These will be located across a select group of the high priority streets deemed suitable through our chargepoint mapping analysis.

3.17. Ideally the pilot should last for about a year, though successful installations will remain for the agreed license period (typically 5-10 years). Subject to review, e.g. receipt of positive feedback, high utilisation and fulfilment of objectives, the length of the pilot might be reduced, with a view to bringing forward a more widespread implementation of EV CPs.

3.18. A technology agnostic approach to infrastructure delivery will contribute to meeting current resident requests in high priority areas, goes part way to meeting Bromley’s residential charging needs, under the suggestions made by the ICCT and will help inform the best route to chargepoint network expansion.

3.19. Although the exact design and scope of the pilot is to be determined, objectives should be to:

- Evaluate a variety of emerging charging solutions and their performance;

- Identify community responses to the installations and any modified parking arrangements;
 - Develop insights from the pilot to scale up the public charging network in Bromley.
- 3.20. Exact locations for chargepoint installation within priority areas of the borough will be determined by:
- Assessment of priority areas by Traffic and Parking, and Highways teams to outline siting opportunities e.g., maximum number per street;
 - The chargepoint operators (CPOs), as locations need to be commercially viable for them to recoup the costs of installation and ongoing maintenance;
 - Locations where residents have requested chargepoints and volunteered to become part of the pilot study. This is important to ensure the charging infrastructure is used by the early adopters of EVs in Bromley.
- 3.21. Emulating the pilot project in Oxford (Appendix 4 – Oxford Trial) at least three different charging options should be explored (Appendix 3 – Possible Charging Options). Subject to technical feasibility, these might include:
- Integrated lamp column chargers;
 - Bollard chargers connected to lamp column electricity supplies;
 - Bollard chargers with a new dedicated power supply;
 - Home chargers, with Gully;
 - Feeder pillar with new dedicated power supply.
- 3.22. It is worth noting, that where design of the chargepoint means CPOs have to establish a new electrical connection, cost of installation is usually much higher. Typically, these CPOs therefore operate using allocated, or dedicated bays on street, so they can recoup the costs of installation, without other highway users blocking use of the chargepoint. Dedicated bays will therefore mean the temporary loss of a non-EV parking space to residents.
- 3.23. Installations per supplier will be kept small e.g., between 5 and 10 installations each. This will allow the Council to direct award contracts under an existing framework, ensuring operators are properly vetted, without committing to a single large contract.
- 3.24. At the discretion of the Portfolio Holder, a ‘Gully Charging’ trial e.g., use of home chargers and gullies, should be immediately pursued, as part of the pilot (see Appendix 3). This is suggested due to significant benefits for both residents and the Council including:
- Ability for residents to tailor their transition to low emissions vehicles, applying for the installation of a Gully as and when required (in the same way they request a drop curb);
 - Avoidance of additional street furniture on the highway;
 - Low maintenance according to current trials;
 - Future revenue generation for the Council if successful, with installations eventually undertaken by the Councils’ Highways Contractors; and
 - Cost savings for the residents, as home charging is often cheaper than charging using on-street chargepoints e.g., as little as 5 pence per kWh off-peak, versus 20-40 pence per kWh respectively.
- 3.25 It is anticipated that the Gullies are fully funded by the residents who are interested in participating in the trial. However, other options remain open, including use of the Councils’ Section 106 Carbon Offset Fund.
- 3.26 Full details on locations for installation, as well as legal, financial and maintenance considerations will be brought to committee in January, or March, following engagement with residents who agree to participate.

4. IMPACT ON VULNERABLE ADULTS AND CHILDREN

- 4.1. Positive impact on users of the highway in relation to air quality improvements.
- 4.2. Any additional street furniture required to support expansion of the charging network will be installed in accordance with the Highways Act, to prevent trip hazards and trailing cables, therefore maintaining safety and accessibility.

5. POLICY IMPLICATIONS

- 5.1. The most significant policy drivers for the electric vehicle charging strategy and the pilot project include:
 - LBB's Net Zero by 2029 target, which includes achieving zero emissions in our fleet;
 - National Net Zero by 2050 and the intermediary 78% reduction in emissions by 2035 compared to 1990 levels;
 - The 2030 ban to end the sale of new petrol and diesel cars and vans;
 - Bromley Air Quality Action Plan targets to roll out EV charging infrastructure and trial lamp post column chargepoints.

6. FINANCIAL IMPLICATIONS

- 6.1. There are no budget implications in producing the Strategy as the work has been undertaken by officers and therefore funded from within existing staffing budgets.
- 6.2. There are a number of options for installation of residential charging points and these need to be investigated further, to identify the associated installation and maintenance costs, along with possible sources of funding, and any potential new revenue income streams. This will be included in a report back to this Committee in the new year.
- 6.3. The report will also set out the costs and funding of undertaking the proposed pilot scheme, which service officers are expecting to be cost neutral to the Council, but this will need to be confirmed.

7. LEGAL IMPLICATIONS

- 7.1. The London Local Authorities and Transport for London Act 2013 (Section 16) specifically deals with the implementation and granting of permission for electric charging points.
 - Section 17 requires a local authority to provide notices before exercising powers under section 16.
 - Section 18 requires a local authority to consult and obtain permission from other authorities that may be relevant.
- 7.2. As identified in paragraph 3.26 and various places throughout this report, in implementing the strategy and pilot scheme to secure Charging Points, will depend on the application of the strategy to any given site or location considering the benefits, costs, income and financial/commercial structure. There are likely to be a number of different procurement solutions available to meet the council's specific requirements where good value must be demonstrated. These will include tendering for goods and services, concession contracts, available frameworks. As stated elsewhere in this report, compliance with the Council's Contract Procedure Rules and

Procurement law will be ensured, if applicable. In addition to this, land-based solutions (lease or license) may be preferable and for certain lease disposals, best consideration under section 123 of the Local Government Act 1972 must be demonstrated.

8. PROCUREMENT IMPLICATIONS

- 8.1. If agreed, this report indicates there will be a future procurement for the installation of chargepoints across the borough.
- 8.2. Any forthcoming procurement must be approved in accordance with the Council’s Contract Procedure Rules.
- 8.3. In accordance with Clause 3.5 of the Contract Procedure Rules, the Head of Procurement must be consulted regarding the use of any Framework. In accordance with CPR 2.1.2, Officers must take all necessary professional advice.

Non-Applicable Sections:	Personnel Implications
Background Documents: (Access via Contact Officer)	Appendix 1 – LBB Electric Vehicle Charging Strategy 01/10/21 Appendix 2 – Mapping Analysis – 10/08/21 Appendix 3 – Possible Charging Options – 30/09/21 Appendix 4 – Oxford Trial – 01/11/19 LBB Draft Open Space Strategy LBB Air Quality Action Plan 2020-2025 Bromley Local Plan 2019 LBB Digital Strategy LBB Net Zero Action Plan Bromley’s Third Local Implementation Plan GLA - New London Plan 2021