

London Borough of Hillingdon

Corporate Services & Partnerships Policy Overview Committee

Tuesday 14 January 2014

Electric Vehicle Charging Points

1. Introduction

In Greater London, road traffic contributes over 18% of all CO² emissions, 41% of nitrogen oxides (NOx) and 67% of London's emissions of particulates (PM10).

Electric vehicles (EVs) are typically around 40% more efficient than conventional internal combustion engine vehicles. They are very effective at converting electricity into forward momentum, while in conventionally fuelled vehicles a lot of energy is lost as heat and vibration. Equally, EVs do not consume energy while stationary or coasting, and some of the energy lost when braking can be recaptured through regenerative braking.

When considering CO² emissions per km including electricity generation 'well-to-wheel', EVs produce around 80g CO² per km. The same figure for an average internal combustion engine powered vehicle is around 147.6g CO² per km. However, one of the drawbacks of EVs is their range. The Nissan Leaf has a range of 109 miles, the Ford Focus Electric 75 miles.

2. Electric Vehicle Charge Point usage Hillingdon

There are 14 EV Charging Points in Hillingdon. The table below shows the number of times a selection of 8 of these was used over the period 1st January to 23rd December 2013 and the kWh used.

Chargemaster Electric Vehicle Charging Point Usage 1st January to 23rd December 2013

Electric Vehicle Charging Point Location	Number of time used	kWh Used
Botwell Sports & Leisure Centre East Avenue, Hayes, UB3 2BG	7	4.4
Fairfield Road Car Park Yiewsley, West Drayton, UB7 8EY	13	29.3
Green Lane Car park Hillingdon Green Lane, Hillingdon, HA6 2XP	14	39.5
Pump Lane Car Park, Hayes, UB3 3NB	29	278.2
Hillingdon Civic Centre High Street, UB8 1UW	28	128.2
Hillingdon Sports and Leisure Complex, Gattings Way, Uxbridge, UB8 1JJ	22	215.4
Grainges Car Park, Uxbridge Shopping Centre, Uxbridge, UB8 1BS	263	2650.9
Brandville Road Car Park, West Drayton, Uxbridge, UB7 7LT	275	2116.6

Source: Chargemaster (2013)

3. Electric Vehicle ownership in Hillingdon and forecast growth

The total number of EVs registered in London in 2011 was 2,313. In the document 'An Electric Vehicle Strategy for Hillingdon', MVA (2013), it is reported

APPENDIX A

that London is likely to account for a disproportionately large share of UK EV sales. This is because average trip distances in London are shorter compared to other parts of the country. 90% of car trips in London are less than 10 miles; consequently the range limitations of current battery technology are less significant. Furthermore, EV uptake in Hillingdon is likely to be higher than in the rest of London. MVA (2013) explain that compared to other London Boroughs more Hillingdon residents are able to park off-street both at their home and workplace, making it easier to install and more convenient to use an EV Charge Point. To predict EV uptake in Hillingdon, MVA (2013) have applied the London wide mid range uptake forecast, this would equate to 108 new EVs being registered in the Borough in 2015, 271 in 2020 and 813 in 2025. With a total of 337 EVs registered in the Borough by 2015, there would be 1,410 by 2020 and 4,391 by 2025. This would equate to a 2.9% share of the overall vehicle fleet in the Borough by 2025.

4. Promotion of Electric Vehicles in other London Boroughs

Number of EV Charging Points

- LB Hammersmith and Fulham have 25 EV Charging Points with a capacity for 30 vehicles
- LB Brent has 31 EV Charging Points with a capacity for 61 vehicles

Across London, a variety of parking incentives are being offered by boroughs

- London Borough of Richmond offers free parking to residents that own EVs
- London Borough of Kingston offers free parking for up to 3 hours while recharging
- In the London Borough of Hackney EVs users are eligible for free parking permits in controlled parking zones (CPZ) areas. The borough also offers EV drivers free parking in EV charging bays
- London Borough of Sutton offers drivers of EVs free parking while charging at three of their centrally located multi-storey car parks
- London Borough of Wandsworth offer EV users reduced priced parking permits called “green permits”

5. Promoting EV use in Hillingdon

MVA (2013) report that the likely profile of EV ‘early adopters’ are

- ‘Environmentally Aware’ – keen to reduce their emissions
- and/or ‘Tech Savvy’ – eager to use new technologies
- sufficiently high income to be able to afford an EV

To promote EV uptake and plan the installation of EV Charging Points, packages such as MOSAIC can be used to identify clusters of population likely match the above profile. This data can then be cross reference with spatial factors including

- access to off-street parking
- availability of parking at workplaces
- number inbound car commuters

APPENDIX A

Within Hillingdon MVA (2013) identified six locations where take up of EV is most likely:

1. Uxbridge – Central and North
2. Northwood – West
3. Ruislip – Central
4. Eastcote – Central
5. Northwood – Central
6. Hayes

6. Electric Vehicle Dealerships

Dagenham Motors Ford Hayes, Fairview Business Center, Unit 37 Clayton Rd, Hayes, Hillingdon, Greater London, UB3 1AX	Nissan London West, Concord Road, Western Avenue, London, W3 0RZ	Peugeot, 221 Bath Road Slough SL1 4BA
-------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------	------------------------------------------------

7. References

MVA, An Electric Vehicle Strategy for Hillingdon (2013), Seventh Floor, 15 Old Bailey, London, EC4M 7EF, United Kingdom.

8. Contact details

Alan Tilly

Transport and Aviation Team Manager

Tel: 01895 250970

Email: atilly@hillingdon.gov.uk