| Committee(s) | Dated: |
|---|---|
| Planning & Transportation Committee<br>Port Health and Environmental Services Committee | 2 May 2017<br>9 May 2017 |
| **Subject:**<br>Electric Vehicle Charging Update | **Public** |
| **Report of:**<br>The Director of the Built Environment | **For Information** |
| **Report author:**<br>Ian Hughes, Assistant Director (Highways) | |


## Summary

In the context of the current debate on air quality, Members of the Port Health & Environmental Services Committee recently requested an update on the current provision of electric vehicle charging facilities in the City.

This report covers three specific areas, namely:

- Standard electric charging facilities in the City's car parks;
- Rapid charging facilities in the City's car parks;
- General on-street charging facilities.

Matters are progressing in all three areas, with a particular focus on improving the technology in our car parks to make it more reliable, and on taxi recharging facilities given that taxis are the primary source of NO2 pollution from road based transport in the City. However, the urban realm impact, utility constraints and the ambition to better manage (and ideally reduce) traffic levels mean that the support for electric vehicles must be considered in a wider context.

As a result, this report just covers the most recent developments, and a further report considering the cross-cutting policy implications arising from this workstream will be brought to both the Port Health and Planning & Transportation Committees in due course.


## Recommendation(s)

Members are asked to receive this report.

## Main Report

### Background

1. The City has provided some form of charging equipment for electric vehicles for nearly 15 years, during which time there has been a gradual increase in interest (if not necessarily demand) for using this equipment. This was firstly encouraged by the Congestion Charge concession for electric cars, and more recently by the increasing public awareness of air pollution issues.

2. During that time, the City's electric charging points have been exclusively provided in its five public car parks, namely:

    - Baynard House (Queen Victoria St)
    - London Wall
    - Minories
    - Smithfield
    - Tower Hill

3. By contrast, the City's constrained urban realm environment has meant that the opportunity to accommodate recharging equipment on-street has been extremely limited, typically because of the difficulty in finding available room for this equipment (both above and below ground) and because of its potential impact on the urban realm. In addition, the City's continual turnover of building development activity has not necessarily provided the steady state urban realm within which long-term locations for electric charging equipment could be selected.

4. Given the City's limited roadspace, and the need to address a wide range of policy objectives such as road danger reduction, green infrastructure provision, reducing congestion and supporting placemaking, officers have policy approval to reduce the amount of traffic in the City overall, to spread it over a longer period and to better manage it. Therefore the support for electric vehicles must be considered within the context of the need to have fewer vehicles in the Square Mile overall.

5. Nevertheless, the City's focus on air quality as a high corporate priority, and the establishment of the Low Emission Neighbourhood (LEN), has meant these opportunities and constraints are now being reconsidered, and the City's direction on electric charging provision will partly be informed by the various worksteams outlined in this report.

6. In particular, the Low Emission Neighbourhood is a scheme designed to improve local air quality by reducing traffic and encouraging / supporting low & zero emission vehicles. It centres on the Barbican and Golden Lane Estates, the Guildhall area and St Bartholomew Hospital, and improvements in air quality are expected both within these areas and more widely across the City due to an increase in low & zero emission vehicles. The City Corporation was awarded £990,000 over three years by the Mayor of London to implement the LEN, and the most successful measures will then be rolled out across the City.

## Current Position

<u>Standard electric charging facilities in the City's car parks</u>

7. The City first offered off-street electric charging points nearly 15 years ago, and at that time, it came with free parking as well as free power supply. The use of electric vehicles was rare, but this concession became so popular as a marketing tool for electric vehicle manufacturers that by 2006 there were more free parking permits in circulation than we had spaces in our car parks.

8. Although actual uptake was still relatively low (given the number of electric vehicles available at the time), it did serve to bring vehicles to the City that would not otherwise have come here, and as the popularity of electric vehicles began to rise, the concession had the potential to become a major problem in terms of lost income and attracting vehicles without City destinations. As a result, Members approved for the concession to be withdrawn at that time.

9. Since 2006, drivers of electric vehicles have had to pay to park as a normal car park user, whether a residential season ticket holder or an hourly parker, but once inside the car park, they have been able to use one of 10 charging units in each of our facilities.

10. Those units had previously been supplied and operated by TfL under a pan-London scheme called Source London, but for various reasons, the equipment proved extremely unreliable, and TfL's contractor appeared unable or unwilling to resolve these issues. As a result, the equipment caused frequent public complaints, and usage levels were undoubtedly suppressed. (Surveys of our car parks last year typically found no more than one or two electric vehicles charging across all five car parks at any one time.)

11. It was felt this substandard service could not continue, particularly given the increasing focus on air quality, and a change in the Source London contract at TfL allowed the City to opt out of that commitment. As a result, the City has now procured its own contractor to replace Source London, reporting directly to the Department of the Built Environment through an appropriate Service Level Agreement to ensure much higher standards of reliability.

12. That contractor is Chargemaster, who have considerable experience in operating schemes of this type throughout the UK. Their agreement with the City has contractual standards for repair times, reliability, management information & customer care, and their equipment is suitable for use by all types of electric vehicle manufacturer. To charge a car, drivers sign up to Chargemaster's membership scheme called Polar, which can be done as a one-off user ('pay as you go') or as a scheme member for regular users. Details can be found at www.polar-network.com.

13. The process of swapping over equipment, installing new power supplies and improving communication links (all part of the underlying problem with Source London) is currently underway, with units already installed and operational in Minories and Tower Hill car parks. London Wall, Baynard House and Smithfield are due to follow in April, so that by the end of that month (at the time of writing), fifty 7kw recharging points should be available across the City's public car parks. Discussions are also underway to install this equipment in the Barbican Estate car parks, ensuring that like-for-like facilities are also available for local residents there.

14. We fully expect this initiative to resolve what have been justifiable complaints about TfL's equipment, which may result in an increase in usage as people find the new chargers to be much more reliable. Equally, developments in 'green fleet' micro consolidation centres may also increase the demand for charge points. If

either happens and we find that demand starts to outstrip the current supply, our contract with Chargemaster allows us to increase the number of units at nil cost to the City.

Rapid charging facilities in the City's car parks

15. Rapid charging equipment is similar in concept to a standard charging unit, but it can deliver the necessary charge in a much shorter timescale (ie 20-30mins rather than 3-4 hours). Such 50kw equipment has only recently become available and affordable, so this is likely to be the next stage of technology rolled out.

16. Traditional charging equipment is aimed at someone who is likely to leave their car all day to charge, meaning our typical customers have been commuters and residents. By contrast, rapid charging is aimed at those drivers who only want to stay for short periods, making it more suitable for taxi, delivery & courier drivers if they are prepared to enter our car parks to use it.

17. Initial assessments of our car parks suggest that finding an appropriate location for this equipment (to facilitate the faster turnaround) may be more of a challenge, but that review is currently on-going. In particular, the momentum and funding provided by the LEN initiative may help identify possible locations for this equipment to be installed within that geographical area.

General on-street charging facilities

18. As noted earlier, the City currently does not offer recharging facilities on-street, but given the impetus provided by the LEN, a small number of locations are now being considered for the trial of 22kw semi-rapid charging points. These are being targeted for use by taxis to begin with, with the equipment able to 'top up' an electric taxi's charge by 25%-40% in 30-40mins.

19. By focusing on taxis, who are the primary source of NO2 pollution from road based transport in the City, this will help support the creation of a critical mass of London-wide infrastructure to facilitate a shift from diesel to electric taxis. The taxi rest bays in Noble Street and Ropemaker Street are the first locations being considered, although these and any other locations will still have to be subject to the usual constraints caused by the City's unique density of underground utility infrastructure.

20. The 22kw taxi rest bay trial is likely to form just one part of the wider solution, as research commissioned by TfL suggests that London will require a network of at least 150 rapid (50kw) charging points to cater for electric taxis in the long-term, many of which will need to be in Central London. With this in mind, the Mayor of London and the Chairman of London Councils' Transport & Environment Committee have recently written to the Chairman of the City's Policy & Resources Committee, asking for greater support to identify locations to install such equipment.

21. As the provision of on-street recharging facilities would become a new function for the City, it would incur new contractual costs in terms of energy &

maintenance, as well as a potential long-term liability should the equipment need to be removed. In addition to meeting a public need, the service must also be viable and cost-effective in the long term, and the recent examples of redundant electronic litter bins and seldom used pay phone kiosks means the City would not want to leave itself open to the risk of having to meet the cost of removing redundant equipment left in situ on-street.

22. TfL may have another Source London-type framework contract available to procure a supplier, but the physical size of the equipment, the maintenance aspects, the operational control and the urban realm issues will all need to be considered before commencement. However, exploring the viability and appropriateness of a wider trial within the LEN area is one of the project's ambitions for 2018, and although the initial priority is to accommodate charging provision for taxis, future consideration also needs to be given to the needs of delivery and servicing vehicles as more types of commercial electric vehicles are launched every year.

## Corporate & Strategic Implications

23. Addressing issues of air quality, transport policy, car parking provision and urban realm design are all priority areas for the City Corporation, and are being proactively managed in co-operation between the Department of the Built Environment and the Markets & Consumer Protection Department.

24. The operational activities outlined here are serving to inform the aims and aspirations of the City Corporation, which will need to balance the benefits of facilitating a switch to electric vehicles by residents, taxis and servicing vehicles with the disbenefit of potentially attracting more traffic, adding to congestion and cluttering the urban realm. With the Mayor's Transport Strategy due to be published in May, a series of longer-term policy options to consider the dependencies between these areas will be brought to Members of both Committees later this year.

## Conclusion

25. Progress is being made to upgrade the City's off-street electric charging equipment, so that it becomes reliable, fit for purpose and meets the needs of the City's car park users. Other options for electric vehicle charging trials are being considered given the momentum and funding provided by the Low Emission Neighbourhood, but are more likely to be implemented in the medium term.

## Appendices

None.

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