

Transport and Environment Committee

10.00am, Thursday, 2 March 2023

Response to motion by Councillor Arthur and Project Update - Electric Vehicle Charging

Executive/routine Wards Council Commitments	Executive All
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1. Recommendations

- 1.1 It is recommended that Transport and Environment Committee notes:
 - 1.1.1 The update on the Electric Vehicle Charging Point implementation project;
 - 1.1.2 The changes to the charging and enforcement tariffs;
 - 1.1.3 The scope of the expanded network and the intention to continue to work with Scottish Futures Trust and Transport Scotland to undertake detailed market engagement to help further refine and finalise the future scope and commercial arrangements;
 - 1.1.4 That the Business Case detailed in this report will be submitted to Transport Scotland to seek further planning and development funding with a view to securing agreement in principle for available grant funding; and
 - 1.1.5 That a further update will be provided to Committee prior to commencing procurement.

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Report

Response to motion by Councillor Arthur and Project Update - Electric Vehicle Charging

2. Executive Summary

- 2.1 This report provides an update regarding the Council's ongoing progress in expanding EV charging provision across Edinburgh and responds to the motion by Councillor Arthur from Committee on 3 November 2022.

3. Background

- 3.1 On [31 March 2022](#), Transport and Environment Committee approved the introduction of 81 on-street EV charge points within Edinburgh funded by the [Switched on Towns and Cities Challenge Fund](#) which is being provided by Transport Scotland.
- 3.2 In September 2022, the Council completed the installation of these 81 on-street EV charge points, creating an additional 141 EV charging bays within Edinburgh.
- 3.3 On [24 February 2022](#), the Council approved its budget for 2022/23 which comprised introducing new tariffs for Council owned publicly accessible EV chargers. This new enforcement and tariff regime was approved by Transport and Environment Committee on 31 March 2022.
- 3.4 In May 2022, the Council formally introduced the enforcement and tariff regime for all Council owned publicly accessible EV charge points.
- 3.5 On [3 November 2022](#), Committee approved an adjusted motion by Councillor Arthur on Dynamic Pricing on EV Charging.
- 3.6 Committee have been kept updated on progress with the implementation of Electric Vehicle charging through Business Bulletin updates on [28 January 2021](#), [14 October 2021](#) and [8 December 2022](#).

4. Main report

On-street EV Chargers: General Update

- 4.1 As previously reported to Committee, the Council has completed the first phase roll-out of EV charging points, as part of a project funded by Transport Scotland's Switched on Towns and Cities Challenge Fund, with all chargers going live on 5 September 2022.
- 4.2 There are some ongoing operational issues with the newly installed 50kW rapid chargers and officers are working closely with BP Pulse, ChargePlace Scotland and Transport Scotland to resolve these issues as quickly as possible.
- 4.3 The new enforcement and tariff regime was introduced on 2 May 2022. The tariffs were set so that the EV charging points were covering their operating costs (such as staff costs, electricity, maintenance and ChargePlace Scotland fees) but were not generating an operational surplus.
- 4.4 Usage and customer feedback has continued to be monitored and analysed to try and identify possible service improvements. The key themes of the feedback received from customers are:
- The maximum stay periods are too short for rapid chargers;
 - The maximum stay periods should not be enforced overnight;
 - Additional information is required to advise drivers of the enforcement and tariff regime; and
 - EV bays can often be blocked by non-EVs.
- 4.5 A full review of the current enforcement and tariff regime has been undertaken as part of the budget setting process for 2023/24, ensuring that the revised tariffs continue to cover the operating costs in the face of recent increases to the cost of electricity.
- 4.6 The table below outlines the revised tariffs and maximum stay periods and overstay penalties for each charger type:

Charger Type	Tariff (charge per kWh)	Maximum Stay Period	Overstay Penalty
Standard (7kW)	45p	12 hours	£30
Fast (22kW)	50p	3 hours (enforced between the hours of 08:00 and 23:00)	£30
Rapid (50kW)	55p	1 hour	£30

- 4.7 These tariffs were approved as part of the Council budget on 23 February 2023.
- 4.8 Council officers are currently developing a financial model, which considers changing energy prices and growing infrastructure and utilisation levels, which will be used to inform tariff setting from 2024/25 onwards and which will allow for initiatives such as dynamic charging to be considered.
- 4.9 This would be a departure from the standard practice of setting tariffs within the Council's annual fees and charges and officers are therefore also investigating the required changes in governance to enable this to happen.
- 4.10 In response to customer feedback and as noted in the table above, it is also proposed to revise the maximum stay periods for fast (22kW) and rapid (50kW) chargers, removing overnight maximum stay periods from fast chargers and increasing the maximum stay period for rapid chargers from 30 minutes to one hour.
- 4.11 These changes will also continue encourage turnover of parking that supports local demand and maintains availability.
- 4.12 It is intended to create new signage to display all enforcement and tariff information at all of the Council's chargers, which will be rolled out in advance of the revised tariffs going live.
- 4.13 It should be noted that the misuse of EV bays can also be enforced through the issue of Penalty Charge Notices (PCN) by the Council's parking attendants, who are employed by NSL.
- 4.14 PCNs can be issued to vehicles which are not actively charging, or to non-EVs, using the following contravention codes:
- 14 – Parked in an electric vehicle charging place during restricted hours without charging.
 - 23 – Parked in a parking place not designated for that class of vehicle.

On-street EV Chargers: Phase 2 - Public Chargers

- 4.15 The Council was successful in its bid for funding through the [On-street Residential Chargepoint Scheme](#) (ORCS) which is being provided by the UK Government's Office for Low Emission Vehicles (OLEV) and the Energy Saving Trust (EST).
- 4.16 £195,669.92 of funding is being utilised to deliver a further 22 public charge points in residential areas, creating 44 charging bays, which is expected to be completed by Spring 2023. Details of the proposed locations are provided in Appendix 1 and are also available on the [Council's EV website](#).
- 4.17 The proposed locations were identified using a scoring framework

developed from a business case produced by the EST. The scoring framework looked at deliverability (access to the grid / power connections) and users and demand (conveniently located and to meet projected demand).

- 4.18 The scoring framework also considered policy data (air quality and congestion levels) and strategic direction from the Council's City Mobility Plan (CMP) which was approved by Committee on [19 February 2021](#).
- 4.19 The Council is also working closely with BP Pulse to deliver Community Benefits as part of the contract and will be trialling dropped kerbs at select locations to improve the accessibility of the chargers. This aligns with the newly created Edinburgh Street Design Guidance factsheet for Electric Vehicle Chargepoints which is being finalised in 2023.
- 4.20 The Traffic Regulation Order legal process to introduce and enforce EV Charging Places at the ORCS locations concluded in December 2022 and received no objections. This will come into effect on 31 March 2023.

On-street EV Chargers: Phase 2 – Car Club Chargers

- 4.21 The Council was also successful in its bid to utilise surplus funding from the [Switched on Towns and Cities Challenge Fund](#) which is being provided by Transport Scotland.
- 4.22 The funding is being utilised to deliver 37 charge points, creating 74 charging bays for the exclusive use of the Council's Car Club partner, currently Enterprise Car Club, which are expected to be delivered by spring 2023.
- 4.23 The proposed locations for the dedicated Car Club chargers are shown in Appendix 2. The EV charge points will be installed at existing Car Club bays to allow Enterprise to switch their fleet to EVs supporting the policies outlined in the CMP and the Council's net zero ambition for 2030. This is one of the biggest projects in Europe to electrify Car Club fleet and will allow Enterprise to supply 74 EVs for use by its members.
- 4.24 The procurement exercise to deliver the ORCS and Car Club chargers concluded in March 2022 with the contract being awarded to BP Pulse. The work to deliver these chargers is already underway and is expected to be completed by Spring 2023.

Pathfinder Project

- 4.25 As reported to Committee in March 2022, external public sector funding for EV infrastructure is reducing or stopping. The Council have therefore been working with Scottish Futures Trust (SFT) on a Pathfinder project to develop a full business case to determine future financing and delivery models for EV charging infrastructure.

- 4.26 The anticipated outcome of this business case is that the Council will seek to partner with private sector providers to encourage investment enabling the roll out of future EV charging provision. The Business Case will therefore enable the Council to procure a contract with a commercial charge point operating partner to satisfy the city's EV infrastructure needs over the coming years.
- 4.27 This business case will also help to unlock access to the remaining funding being made available through Transport Scotland's Electric Vehicle Infrastructure Fund.
- 4.28 To achieve a comprehensive network of public charge points, forecasting work has identified the need for 504 additional EV charging points to be provided in the city, which are anticipated to be delivered over a three-year period from 2024/25. These are proposed to consist of 420 7kW standard chargers, 40 22kW fast chargers and 44 50kW rapid chargers.

Financial Year	7kW	22kW	50kW	Total
2023/24	75	12	12	99
2024/25	125	12	16	153
2025/26	220	16	16	252
Total	420	40	44	504

- 4.29 The Business Case estimates that the private sector will deliver charge points at retail parks, supermarkets and petrol stations, totalling around 400 of these additional chargers by 2026 based on:
- Larger dedicated car parks providing 6% of parking bays with charge points;
 - Half of petrol stations installing four charging points;
 - Half of retail parks installing 15 charge points; and
 - Half of supermarkets installing five charge points.
- 4.30 This therefore leaves approximately 100 chargers to be funded and delivered by the Council. A bid for up to £1.5m of capital grant funding will be submitted by the Council to Transport Scotland through their Electric Vehicle Infrastructure Funding to help towards funding the EV charger investment programme over the next three years. The remaining proportion of the funding will be mobilised by partnering with a commercial charge point operator.
- 4.31 To encourage and to enable private sector investment, a 15-year concession-type contract is being proposed. A concession type contract is desirable from a Council perspective to maintain influence and control over charge point locations and tariffs. It will also enable the Council to minimise risk, maximise income potential and ensure alignment with future Council decisions. Whilst management of existing chargers would be transferred to the chosen operator, the Council would retain control of the below ground infrastructure.
- 4.32 The contract will be developed with support from the Council's Procurement

Service. It is envisaged that the successful bidder will be given the rights to install, operate, and maintain new and existing assets to predetermined specifications. Tariffs will be set by the operator and profit will be subject to gainshare with the Council. Performance monitoring will form part of the contract and regulate tariff adjustments.

- 4.33 Locations are not yet clearly established, though a proposed pipeline of sites have been explored with SPEN (the energy network provider), with detailed cost estimates being finalised for a refined list of locations in the city. Locations will also be further refined through working closely with the successful commercial partner.
- 4.34 The Council will continue its approach to EV infrastructure provision by focusing investment in areas where the majority of households do not have access to off-street parking, especially high-density population areas, targeting those with the greatest need whilst maximising the investment. This will be especially true where there are no private car parks which could host chargepoints.
- 4.35 To-date hub-based charging solutions have been delivered at on-street locations, comprising charging bays for four or more vehicles. This approach has offered the Council the following benefits:
- Maximising investment through economies of scale at a given location: more charging units utilising and benefiting from the substantial costs associated with the civil/electrical engineering works and enabling grid capacity/connections required at each location;
 - Minimising the impact of additional cabinets and potentially substations, which is of a benefit in sensitive locations especially like the World Heritage Site and in conservation Areas, and by attempting to equitably distribute hubs across the city;
 - Charging hubs, as well as being more cost-effective, also support the CMP's focus of reducing private car use, as providing smaller numbers of chargers more broadly around the city is likely to support and encourage car use, rather than encouraging users to think about their travel options; and
 - To further reduce private car use, as described earlier, the Council has invested in chargers for exclusive use by Car Club vehicles, thus supporting shared mobility and using cleaner vehicles. This approach, paired with the parallel Council project to develop mobility hubs in the city, presents further opportunities for supporting electric vehicle charging points and encouraging users to consider other modes potentially available at hubs, including Car Club vehicles.
- 4.36 The Council sought to test the existing approach to charger provision through

focus groups. The main points raised were that it would be preferable if:

- There were a greater number of slower chargers on-street to enable overnight charging;
- Charging hubs were within walkable distances of neighbourhoods; and
- Maximum stay periods for rapid chargers were extended.

- 4.37 No issues were raised through these focus groups regarding the Council's approach to hub-based charger provision. Going forward the intent is to provide greater levels of longer stay charging opportunities in the city near to households without off-street parking, especially to enable overnight charging.
- 4.38 New EV charging infrastructure will also continue to be sited at public transport interchanges to support the Council's modal shift ambitions, with evidence of their success from the provision of such charging points recently provided at Ingliston and Hermiston Park and Ride sites. Longer stay chargers and rapid chargers are also proposed to serve town centres to support City Plan policies to strengthen local businesses and local shopping trips and use of town centres.

5. Next Steps

- 5.1 The work to deliver the ORCS and Car Club chargers will continue and is expected to be completed by Spring 2023. Once this work is complete, the ORCS chargers will be commissioned with ChargePlace Scotland and made available to members of the public. The Car Club chargers will also be commissioned with ChargePlace Scotland and made available to Enterprise for the use of Car Club vehicles.
- 5.2 It is anticipated that the new EV tariffs and enforcement regime will be introduced on 3 April 2023. A full communications campaign will be launched at this time, which will involve updating the Council's [EV webpages](#), social media posts and updating signage at our chargers.
- 5.3 Usability guides will be made available, helping to show members of the public how to operate the chargers, and ChargePlace Scotland will also run a concurrent campaign to ensure that all of their members are informed of the proposed changes.
- 5.4 The detailed development of the Pathfinder project Business Case and Implementation Plan, with SFT, will be finalised in line with the key aspects set-out in this report. The Pathfinder Business Case will then be submitted to Transport Scotland with a view to securing agreement in principle for available grant funding.
- 5.5 A Procurement Strategy will be developed with colleagues in the Council's Procurement Service and a Prior Information Notice will be issued to

undertake detailed market engagement helping to further refine and finalise the envisaged scope and commercial arrangements.

- 5.6 A further update will be provided to Committee prior to the Council commencing procurement activities to appoint a commercial EV charge point partner.

6. Financial impact

- 6.1 The Council is working to develop a financial model that will enable future EV tariff revisions based on charger utilisation, maintenance costs, energy prices and staffing costs. This is due to be completed in 2023 and will be used to develop proposed EV tariffs in 2024/25.
- 6.2 The fee for the development of the Pathfinder Business Case was £57,500, which has been fully met through Transport Scotland's Electric Vehicle Infrastructure Fund. The Business Case is the critical component of a further funding bid being made to Transport Scotland to secure up to £1.5m capital grant to support the delivery from 2024/25 of the EV chargers, as set out in this report.

7. Stakeholder/Community Impact

- 7.1 As noted in the Background section, on 22 September 2022 the Council approved a motion requesting that officers consider opportunities for allowing residents to suggest new EV charging point locations and for this information to be used to determine the locations of future charging points. The [EV webpages](#) have now been updated to include the EV team email address that can be used for all enquiries including location requests for future chargers.
- 7.2 The Council has also commissioned video clips to guide members of the public on how to use Council chargers. These are anticipated to be added to the EV webpages by Spring 2023.
- 7.3 As part of the Pathfinder project, two focus groups were undertaken with Edinburgh residents, one group consisted of existing EV drivers and the second group consisted of drivers of other vehicle types. Findings from these focus groups have informed the proposals in this report, including extending maximum stay periods for rapid chargers to one hour, introducing more on-street chargers to enable overnight charging, and developing charging hubs located within walking distance of neighbourhoods.
- 7.4 A market engagement exercise was also undertaken with charge point operators in October 2022 to establish those interested in working with the Council, and the nature of the delivery models and charging solutions. This is in addition to the further proposed market engagement exercise outlined

previously.

- 7.5 Working with private sector partners through the Pathfinder project presents further significant opportunities to engage the public on locations and charger types.

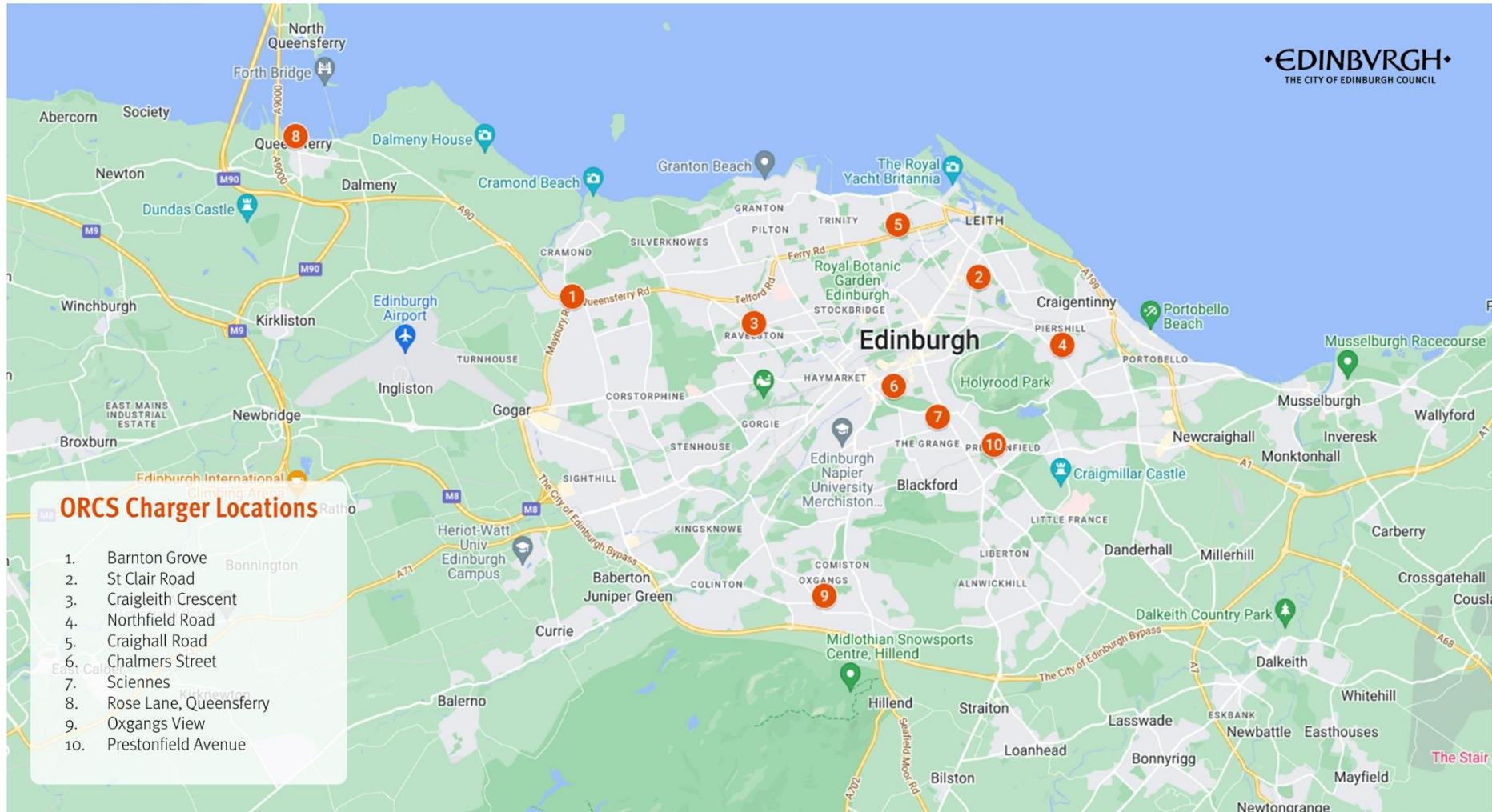
8. Background reading/external references

- 8.1 Parking Action Plan – delivering the City Mobility Plan – Transport and Environment Committee – [2 February 2023](#)

9. Appendices

- 9.1 Appendix 1 – ORCS Charger Locations
- 9.2 Appendix 2 – Car Club Charger Locations

Appendix 1 – ORCS Charger Locations



Appendix 2 – Car Club Charger Locations

