



## Report of the Cabinet Member for Service Transformation

### Climate Change and Nature Scrutiny Performance Panel 10<sup>th</sup> January 2023

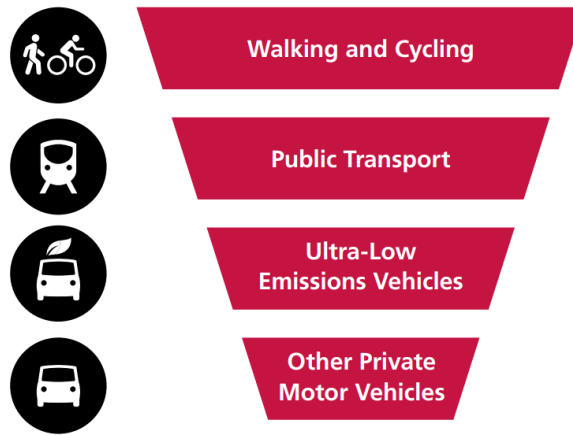
#### Overview of Public Electric Vehicle Chargepoint Installation

<b>Purpose</b>	To provide a briefing requested by the Panel about the installation of Council owned public facing electric vehicle chargepoints in Swansea.
<b>Content</b>	This report includes a summary of the chargepoints installed to date, how they have been funded and provides an overview of the current operating model, and challenges of delivery in future years. The report concludes that progress has been made in the establishment of an initial network of public facing electric vehicle chargepoints, however there are significant financial challenges in delivering further infrastructure in the future.
<b>Councillors are being asked to</b>	<ul style="list-style-type: none"> <li>• Give their views</li> <li>• Consider doing further work on this issue</li> </ul>
<b>Lead Councillor(s)</b>	Councillor Andrea Lewis
<b>Lead Officer(s)</b>	Director – Mark Wade Head of Service – Stuart Davies
<b>Report Author</b>	Chloe Lewis Team Leader – Transport Strategy & Monitoring ZeroEmissionTransport@swansea.gov.uk
<b>Legal Officer</b>	Caritas Adere
<b>Finance Officer</b>	Ben Smith
<b>Access to Services Officer</b>	Rhian Millar

## 1.0 Introduction

- 1.1 Electric vehicles offer both consumers and local authorities the opportunity to create a cleaner, greener and healthier environment, and a more sustainable way of making journeys.
- 1.2 Electric vehicle (EV) registrations have increased considerably in recent years due to their improved range capabilities and zero tailpipe emission status. This expansion in EV ownership has resulted in ever-increasing numbers of chargepoints being installed on residential streets, in car parks, and at key locations adjacent to major trunk roads and motorways across the UK.
- 1.3 The use of electric vehicles and its associated infrastructure supports national policy on air quality and net zero emission targets. The UK Government recently brought forward its policy on ending the sale of new petrol and diesel cars and vans to 2030, which is part of a long-term commitment to reduce air pollution and decarbonise the transport system.
- 1.4 The demand for public chargepoints is increasing, and investment in infrastructure gives people confidence in charging provision, enabling them to make the decision to choose an EV, reducing 'range anxiety' which is considered one of the main prohibiting factors for those considering the purchase of an EV.
- 1.5 It is estimated that there are 35,500 charge points across the UK as of October 2022, and more than 7,500 charge points were added to the UK network between 2020 and the end of 2021
- 1.6 Local Authorities (LA) across the UK vary in their level of investment in electric vehicle charging infrastructure. Securing external capital grant funding greatly increases the capital expenditure available to LAs, giving them the funds required to commission a local network.
- 1.7 **Policy Direction** - Many policies have been developed by both UK Government and Welsh Government in recent years, aimed at reducing air pollution, and transitioning to more sustainable modes of transport. Two notable policies apply to this agenda item, 'Llwybr Newydd' the new Wales Transport Strategy, and the Electric Vehicle Charging Strategy for Wales. Both are Welsh Government policies, published in 2021.
- 1.8 **'Llwybr Newydd'** sets out Welsh Government's strategy for the future of transport in Wales, detailing ambitions and priorities for the next 20 years. The strategy shifts the priority given to modes of transport and sets out a new Sustainable Transport Hierarchy (Figure 1), which prioritises active travel, public transport and ultra-low emission vehicles, above private motor vehicle use. Regional Transport Plans developed in future years will be aligned with this strategy and will employ the same priority matrix for transport interventions.

Figure 1 - Welsh Government | Sustainable Transport Hierarchy

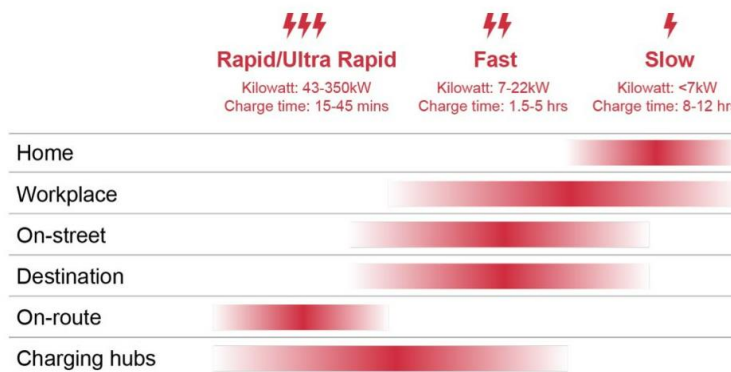


1.9 The **Electric Vehicle Charging Strategy** sets out targeted actions to deliver a vision for electric vehicle charging in Wales. The strategy sets out a vision for charging in Wales that ‘by 2025, all users of electric cars and vans in Wales are confident that they can access electric vehicle charging infrastructure when and where they need it’. The report emphasises the need for a substantial increase in the number of Slow, Fast and Rapid / Ultra Rapid chargepoints available in Wales. It also recognises the need to improve user experience for electric cars and vans and to roll out better quality charging infrastructure.

1.10 **Charging Types and Locations** - EV chargepoints are required to facilitate a variety of charging scenarios, typically agreed as; charging at home, those who park on-street, at a place of work, at motorway and trunk road service stations and privately owned hubs for fleets. The charging behaviours that users adopt vary according to personal need and circumstances.

1.11 There are three main types of EV chargepoints (as seen in Figure 2) and it is important to consider which charger is best suited at different locations, depending on the activity or attraction that is at each location.

Figure 2 – Welsh Government | Charging Types and Locations



1.12 LAs have generally focused on installing on-street and destination chargers, as the primary landowner for city, town, and community car parks, and as the highway authority for placement on-street. Commercial operators have

generally invested in on-route and charging hub type facilities, as these are often the most commercially viable locations.

## 2.0 Existing Infrastructure

- 2.1. Installations 2020-2022 - Swansea Council has done much in recent years to increase the number of EV chargepoints in Council owned car parks, to complement the commercial offering in Swansea.
- 2.2. As of December 2022, Council owned public facing EV chargepoints account for 25 of the available locations across the City and County area, offering a total of 80 EV chargepoints and bays.
- 2.3. An additional 15 chargepoints will be added to the above network with the opening of Copr Bay North Multi-Storey Car Park (MSCP) in the future.
- 2.4. Three on-street locations had previously received funding for the installation of chargepoints, specifically in Uplands, Sketty and Killay, which do not benefit from a council owned car park but do have a central community area served by formal parking bays on-street. Installation has not been possible in these locations due to a number of issues pertaining to their placement in the vicinity of other utilities in the area, however work is on-going seeking to resolve these matters. The three charging units purchased for these locations are currently in storage. Should a resolution not be possible for the on-street locations referenced above, alternative placement will be sought.
- 2.5. Figure 3 outlines the locations of the chargepoints installed, and Appendix A provides an overview map illustrating these locations.

**Figure 3 – Locations of public facing council owned EV chargepoints**



- 2.6. All chargepoints to-date have been installed in council owned car parks, which allows for the dedicated EV recharging bays to be appropriately monitored and managed to reduce misuse, such as internal combustion engine vehicles parking in recharging bays, or EVs parking but not charging in the designated bays. A Traffic Regulation Order (TRO) enables effective management of misuse of the spaces..

- 2.7. Grants Awarded – The chargepoints installed to-date have been 100% grant funded by Welsh Government, or through combining grants from Welsh Government and the Office for Zero Emission Vehicles.
- 2.8. The first phase of installation in 2020 provided an initial strategic network of 12 locations across Swansea. Ten of the chargepoint locations were funded jointly by Welsh Government and the Office for Zero Emission Vehicles, and two wholly funded by Welsh Government, providing a total of 32 chargepoints.
- 2.9. The second phase was installed following a successful grant application to the Welsh Government's Ultra Low Emission Vehicle Transformation Fund 2021-22.
- 2.10. All public charge points are 100% grant funded and provide 100% renewable electricity to users, accelerating Swansea's position in transitioning to a low carbon future.
- 2.11. The current operating model applied to the chargepoints installed between 2020 and 2022 is a third-party concession agreement. Whilst Swansea Council maintains ownership of the chargepoints installed, the council tendered a contract for a commercial operator to take over the maintenance, servicing, repair and operation of the units for the duration of the contract, which is five years with the option to extend. As part of this agreement, the council receives a profit share from the use of the chargepoints and works closely with the chargepoint provider, Clenergy EV, to ensure that open book reviews on pricing result in as low cost per kWh as reasonably practicable.
- 2.12. Clenergy EV is the operating name of EPS Construction, a Swansea based company, who were awarded the contract for the chargepoints installed between 2020 and 2022.
- 2.13. There are alternative operating models, which may be suitable for consideration in future years.
- 2.14. Commercial operators are increasingly offering LAs a partnership opportunity, where the commercial operator will install and maintain an electric chargepoint at no cost to the LA. This involves the LA providing the commercial operator with charging bays reserved for EV charging, in a local authority car park.
- 2.15. A commercial partnership option for Swansea Council could provide a low-risk opportunity, benefiting from no initial outlay costs or the burden of maintenance costs in the future. This option could be considered in the future, should no capital funding be available, however it does reduce or remove the LAs ability to retain a profit share, and have oversight of the charges for use.
- 2.16. Chargepoint Specification – All chargepoints currently installed in council car parks offer 'fast' charging between 7-22kW. Charging at 7kW will typically provide approximately 30miles of range per hour of charging, and at 22kW approximately 90miles of range per hour of charging. It is important to note that range per hour varies depending on how efficient the vehicle is. A vehicle can

only charge at the maximum charge rate that the vehicle can accept. For example, if a vehicles maximum charge rate is 7kW, it will not charge any faster by using a 22kW chargepoint.

- 2.17. The current rate of charging for use of the EV chargepoints operated by Clenergy EV in Swansea is 75p per kWh, and users benefit from no connection fee.
- 2.18. Users of the chargepoints are able to access 24/7 support in both Welsh and English language, and can pay to use the chargepoints either through the Clenergy EV mobile application, with an RFID membership card, or can pay as you go over the phone with no sign up required.

### **3.0 Future Infrastructure**

- 3.1 Challenges of Future Delivery – Swansea Council does not currently have an internal budget for the implementation of public facing EV chargepoints. Those installed over the past two / three years have relied on external grant funding, and this continues to be the case for any future ambition to increase the coverage of this provision.
- 3.2 Welsh Government decided not to announce funding under the Ultra-Low Emission Vehicle Transformation Fund for the current financial year, which removed the main source of funding for further implementation this year. It is not clear as to whether this capital fund will be announced for the next, or future financial years.
- 3.3 The Office for Zero Emission Vehicles continues to offer a limited contribution under its On-Street Residential Chargepoint Scheme, which has this year reduced its contribution from 75% to 60%, meaning that a larger match funding source will be required for new applications.
- 3.4 Whilst Swansea has installed ‘Fast’ EV chargepoints in council car parks to-date, there are EV users who also require the use of a ‘Rapid’ charger, capable of boosting their range in a fraction of the time taken at a ‘Slow’ or ‘Fast’ charger.
- 3.5 ‘Rapid’ chargers are generally places at key locations where people do not tend to dwell for a long period of time and will likely be travelling onwards requiring a greater level of charge. Placement in service stations and adjacent to key trunk roads is the general location of choice for ‘Rapid’ chargers, however as demand increases, and more users transition to EVs, consideration for ‘Rapid’ charging in the city centre will be required.
- 3.6 The cost to install a ‘Rapid’ charger is prohibitive in its rollout, with typical costs exceeding £100,000 per charger.
- 3.7 Another consideration and limitation to the rollout of EV chargepoints is the Distribution Network Operator (DNO) costs. These are site specific, and costs vary significantly, meaning that it is very difficult to accurately cost for any given

location if there is not sufficient time to receive quotations from the DNO when funding is announced, with short application windows.

- 3.8 Grant Application Development – A grant application is being progressed with the Office for Zero Emission Vehicles in this financial year, however this is currently stalled due to significant delays in receiving a connection quotation from National Grid (previously Western Power Distribution), who are the Distribution Network Operator, for a number of potential sites. Match funding for this potential grant application will be required, and once confirmed, this will be brought forward for approval to submit.
- 3.9 Meeting Future Demand – Going back to the Welsh Government’s Electric Vehicle Charging Strategy, this highlights Swansea as being an area of higher charging demand for EV chargepoints in all scenarios in future year modelling. Whilst the council has installed charging infrastructure when funding has been available, there will evidently need to be an increase in private sector investment in the City and County, and this is starting to be seen in the placement of chargers in retailer car parks.
- 3.10 On-street placement of EV chargepoints is an issue many local authorities have tried to find a solution for, and there is yet to be a universally accepted approach to the rollout of this infrastructure in residential areas. Repurposing parking bays to become recharging bays only, enforcement of misuse, identifying areas with the greatest need, and an array of other issues remain. In addition, battery technology and rapid charging times are reducing, which adds to the argument favouring charging hubs where people can top-up with the mileage they require.

#### 4.0 Conclusion

- 4.1 With limited funding sources available, Swansea Council has managed to deliver a robust geographical spread of EV chargepoints in car parks across the City and County area, benefiting the many communities of which they now serve.
- 4.2 Since the very first charging session took place on 11<sup>th</sup> July 2020 up until 19<sup>th</sup> December 2022, the Swansea Council owned public EV chargepoints have:
- Been used for **6,439** charging sessions
  - Delivered **100%** renewable electricity
  - Utilised **93,758kWh** powering approximately **281,274 miles**
  - Saved **73,913kg** of CO2
- 4.3 Whilst challenges remain in the continued expansion of the network, the council’s next steps will be to adopt an EV Charging Strategy, which will seek to outline how best to take forward any future proposals for the placement of charging infrastructure.

4.4 As and when funding becomes available, the council will continue to respond to these opportunities and seek to investigate all funding sources to enable delivery, where possible.

## **5.0 Legal Implications**

5.1 When delivering Transport Schemes, compliance will be required with the relevant Highways and Transport Act measures and guidelines.

5.2 It is necessary to ensure that all terms and conditions attached to external grant funding are complied with and that the Council's Financial Procedure Rules regarding grant application and acceptances are followed.

5.3 For the EV schemes funded by the Office for Zero Emission Vehicles, there are specific quarterly monitoring and reporting requirements for a period of three years after installation, and a requirement that chargepoints installed remain operational for a minimum period of three years.

5.4 From the 1<sup>st</sup> April 2019, the installation, alternation or replacement of outlets and upstands for recharging electric vehicles within an area lawfully used for off-street parking is permitted development under the Generally Permitted Development Order Regulations 1995 (as amended). For any proposed on-street chargepoint locations, where this falls outside of permitted development, planning consent may be required.

5.5 The chargepoints commissioned between 2020 and 2022 have been installed in council owned car parks, which allows for the dedicated EV recharging bays to be appropriately monitored and managed to reduce misuse. A Traffic Regulation Order (TRO) enables effective management of misuse of the spaces.

5.6 Separate legal advice will be sought regarding any contract and procurement issues relevant, as required.

## **6.0 Financial Implications**

6.1 The schemes described in this report have relied wholly upon external capital grant funding to secure their delivery.

6.2 All funding bids submitted were signed off by the Section 151 Officer, and subsequently approved by Cabinet upon grant award.

6.3 For the infrastructure installed to-date, a third-party concession agreement is in place with a commercial operator who is liable for all ongoing revenue costs for the operation and upkeep of the units. The current contract is for a 5-year term, with the option to extend for a further 3 years.

6.4 With no internal budget to install public facing EV infrastructure, additional external grant funding will be required to undertake any expansion of the council owned public network.



## 7.0 Integrated Assessment Implications

- 7.1 The Council is subject to the Equality Act (Public Sector Equality Duty and the socio-economic duty), the Well-being of Future Generations (Wales) Act 2015 and the Welsh Language (Wales) Measure, and must in the exercise of their functions, have due regard to the need to:
- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Acts.
  - Advance equality of opportunity between people who share a protected characteristic and those who do not.
  - Foster good relations between people who share a protected characteristic and those who do not.
  - Deliver better outcomes for those people who experience socioeconomic disadvantage
  - Consider opportunities for people to use the Welsh language
  - Treat the Welsh language no less favourably than English.
  - Ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.
- 7.2 These transport infrastructure schemes will serve to improve public amenity, connectivity and access for all, and will be the subject of consultation as appropriate.
- 7.3 For schemes which are proposed to be developed in future, consultation will be undertaken if schemes are approved by Welsh Government or any other funding body, and individual projects will consider their equality impacts more fully at the appropriate design stages when they will be screened in their own right.
- 7.4 The Well-being of Future Generations (Wales) Act 2015 mandates that public bodies in Wales must carry out sustainable development. Sustainable development means the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the 'well-being goals'.
- 7.5 These schemes will be highly visible to the public and are considered to pose a medium risk to the Council. The cumulative impact of these schemes will be positive for people living near to chargepoints or for those travelling to the communities in which they are located. They will improve public access to EV charging and enhance charging capabilities for communities, making more sustainable modes of transport a realistic option when choosing a vehicle for their transport needs.
- 7.6 The Integrated Impact Assessment (IIA) process ensures there has been due regard to the above. It also takes into account other key issues and priorities, such as poverty and social exclusion, community cohesion, carers, the United Nations Convention on the Rights of the Child (UNCRC) and Welsh language.

7.7 An Integrated Impact Assessment screening form has been completed and is included as Appendix B.

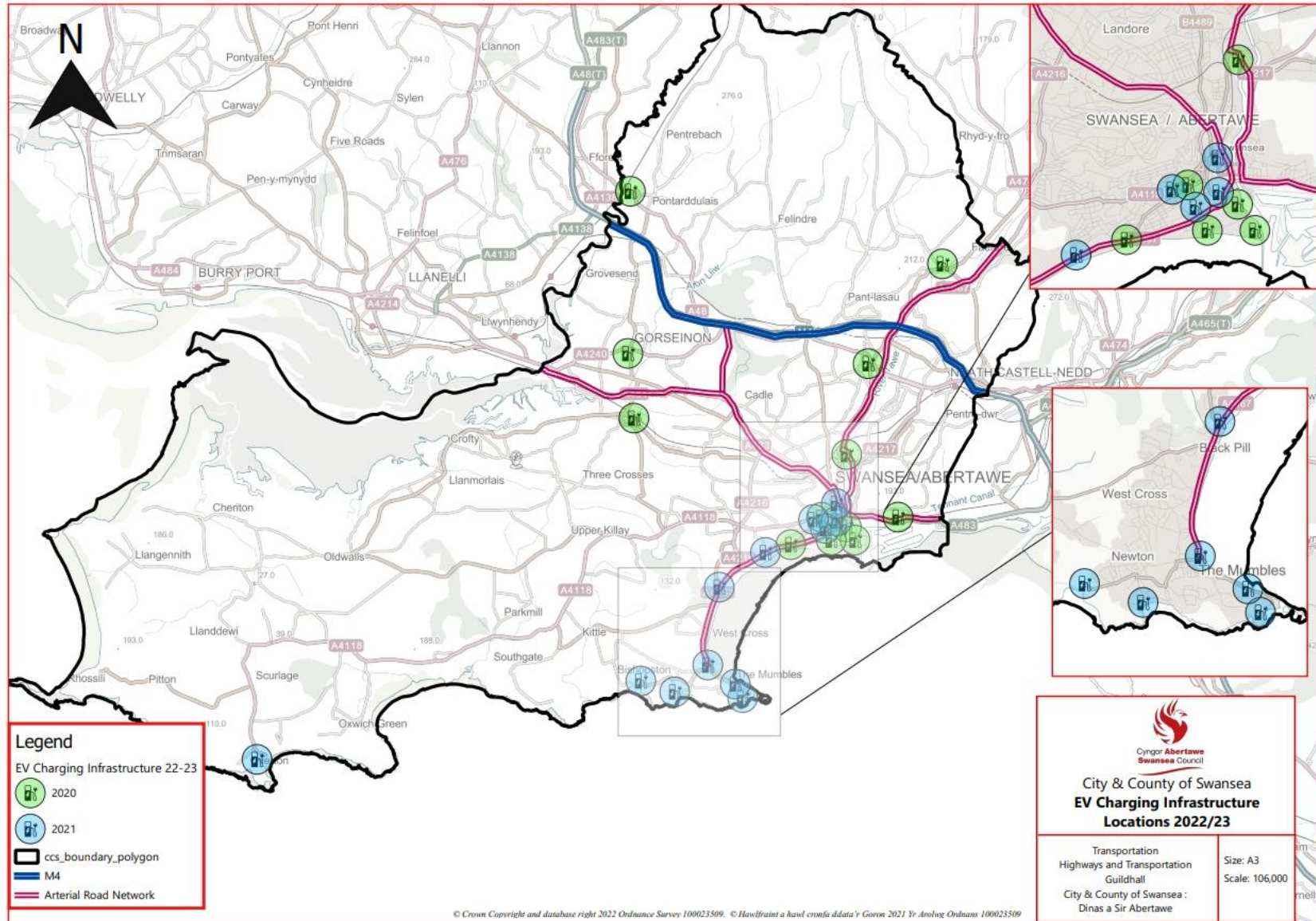
**Background papers:** None

**Appendices:**

Appendix A: Overview Map of Swansea Council Owned Public EV Chargepoints

Appendix B: Integrated Impact Assessment Screening Form

## Appendix A: Overview Map of Swansea Council Owned Public EV Chargepoints



## **Appendix B: Integrated Impact Assessment Screening Form**