

REPORT TITLE: ELECTRIC VEHICLE CHARGING STRATEGY

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REPORT OF PORTFOLIO HOLDER: Cllr Jan Warwick

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WARD(S): ALL

PURPOSE

For Cabinet to consider the recently drafted Electric Vehicle (EV) Charging Strategy ("the draft Strategy"), adopt it and agree recommendations as to further work required to ensure its delivery.

RECOMMENDATIONS:

1. That Cabinet adopt the draft Strategy;
2. That a detailed options appraisal for the delivery and operation of an electric vehicle charging network be completed for consideration at a future Cabinet meeting.

IMPLICATIONS:

1 COUNCIL STRATEGY OUTCOME

- 1.1 One of the key outcomes in the City Council's Corporate Strategy is protecting and enhancing the district's unique environment. In achieving this objective, and in order to meet its legal obligations, the City Council's Air Quality Action Plan, adopted in 2017, sets out a number of core and complimentary measures. One of the complimentary measures is to 'seek to commit to introduce more electric vehicles charging points with car parks'.
- 1.2 The above measure was identified by the Air Quality Steering Group, under the City Council's leadership, to encourage wider behavioural change amongst its citizens in the shared objectives toward a low carbon economy and cleaner air. The measure also supports Central Government's Clean Air Strategy 2018 and their commitment to mandate that all new vehicles will be 'plug in' by 2040.
- 1.3 It will also improve the Council's car parking offer by increasing choice for drivers and supports the delivery of Core Measure 4 (introduce new parking charges to limit diesel and high polluting petrol cars parking in central car parks).

2 FINANCIAL IMPLICATIONS

- 2.1 The draft Strategy which can be found in Appendix 1 has identified in detail the recommended number of charging points required to meet the projected demand and includes a costings analysis. It is estimated that the cost to the Council in delivering the draft Strategy will be £250,000 of which £225,000 is capital works and £25,000 attributable to design and project management costs. However, it should be noted that there are a number of ways this infrastructure could be provided.
- 2.2 The draft Strategy identifies 4 funding options, namely:
- Direct Council investment
 - Grant funding
 - Commercial Investors
 - A combination of the above
- 2.3 This report does not make any funding recommendation at this stage, but seeks Cabinet's approval to undertake a further detailed sector analysis to best inform a decision as to their preferred delivery model. This will include undertaking an options appraisal at an estimated cost of up to £30,000 and for which budget approval has been sought in the car parks major works programme paper also on this agenda (CAB3117 refers).

- 2.4 Further, the preferred delivery model will also be informed by the Council's adopted tariff policy for the use of the EV Points, which will in turn have a bearing on any income received, which might otherwise off set costs of installation and any proposed concessions on parking tariffs. The tariff policy also has the potential to influence the projected and actual use of the EV chargers.

3 LEGAL AND PROCUREMENT IMPLICATIONS

- 3.1 CAB3074 stated Winchester City Council's obligations to meet mandatory air quality standards as set down in The Environment Act 1995 and associated Air Quality (England) Regulations 2010 (EU Directive 2008/50/EC), which sets the legal background against which the City Council has designated an Air Quality Management Area and with it an associated Air Quality Management Plan. However the Air Quality Management Plan did not identify the installation of electric vehicle charging points as having a demonstrable impact on air quality in the short term i.e. within the life of the plan (2020) and there is currently no statutory duty on local authorities to install them. However, by adopting such a strategy, the City Council will be taking a local leadership role in supporting central government's aim of electrification of the national vehicle fleet, which in time will have a considerable impact on local, regional and national air quality. It is also important in underpinning Core Measure 4 which is designed to reduce emissions by discouraging the use of more polluting diesel and petrol vehicles (see 1.3 above).
- 3.2 In line with paragraph 2.3 above and once the sector analysis has been conducted, Officers will act upon Cabinet's subsequent recommendations. Pending the preferred delivery option, full consideration will be given to the Council's Procurement Policy, and will ensure full compliance with the relevant legislation.

4 WORKFORCE IMPLICATIONS

- 4.1 Initially further work will be required to undertake an option appraisal and to ensure that such an appraisal is completed as soon as possible, a budget of £30,000 has been requested in CAB3117 as detailed in paragraph 2.3.
- 4.2 Furthermore depending on the preferred delivery option, there may be some potential impact on staffing as project managing the installation of a network of EV charge points is complex and will be resource intensive. The draft Strategy does identify £25,000 for design and project management costs, which if agreed would most likely be invested in an additional fixed term resource dedicated to the project.

5 PROPERTY AND ASSET IMPLICATIONS

- 5.1 The draft Strategy focuses on delivering an EV solution in WCC's off street parking assets i.e. its car parks, with some small consideration for on street charging (this would need to be led by Hampshire County Council as Highway Authority). The proposed number of chargers and the parking bay allocations

can be found on pages 21 and 22 of the draft Strategy, with a recommended 50 publically accessible EV charging points to serve 57 parking bays.

- 5.2 The logistics of delivering an EV infrastructure is influenced by various detailed matters of consideration, much of which is addressed in the draft Strategy. This includes identifying suitable sites for maximising use, whilst considering power supply and grid constraints.
- 5.3 However it should be recognised that this is a strategy setting out a considered approach for the Council. Should Cabinet be minded to adopt the Strategy, during the project management and delivery of the strategy, it may become apparent that the some of the suggested EV locations as set out in Annex E, may not be feasible and or that more suitable locations may be identified. It should also be acknowledged that depending on the commissioning model selected through the options appraisal process, subsequent to adoption of the Strategy, that the Council may have to release a degree of control of the siting of the EV points to the third party commercial investor.
- 5.4 The draft Strategy proposes a 'clustered' approach to the siting of the EV chargers in Winchester's Town Centre base upon the considered approach taking into account the nature and use of the car parks. It also seeks to ensure an even distribution of EV charge points across the city centre so that no single location is overly served.
- 5.5 Winchester has the highest number of plug in vehicles registered in the Hampshire non unitary authorities in 2017, but this still only represents 0.4% of the total vehicles registered in the district. There are no definitive projections for the uptake of EV's nationally so the draft Strategy has had to make some assumptions as to the likely level of growth over the next five to ten years. On this basis the draft Strategy has made its recommendations as to the numbers of chargers required in Winchester city centre, the Park and Ride sites and in the wider district.
- 5.6 There is therefore some risk that the bays allocated to the EV charging points may not attract the same occupancy as a 'standard' parking bay and that this may present some small cost to the authority. To offset this cost the draft Strategy has proposed a carefully planned installation programme aimed at ensuring that the number of EV charging points caters for the growing demand and therefore promotes the use of such vehicles but does not exceed the projected demand curve.

6 CONSULTATION AND COMMUNICATION

- 6.1 The evolving strategy has been considered by the Air Quality Steering Group. In addition, during the data collection process, the taxi community was consulted and the findings are set out in section 4.4 of the draft Strategy. Although the response rate was overall low, there was a positive view expressed towards the electrification of Winchester's taxi fleet, with a lack of charging facilities cited as being the primary obstacle.

6.2 The Head of Parking and CCTV is a member of the Air Quality Steering Group and is aware of the draft Strategy and its implications for off street parking. Similarly the Corporate Head of Asset Management has been consulted on the proposals within the draft Strategy. The primary consideration from Estates is not so much the physical installation of the EV infrastructure on the WCC Estate, but rather the associated policy on charging. It should be noted that in not charging drivers for use of the facilities, the City Council would need to report the electricity usage against its annual carbon consumption data return to DEFRA.

6.3 Similarly the Portfolio Holder for Environment also sits on the Steering Group and has been consulted on the development of the Strategy. Furthermore, the consultants producing the Strategy, Horizon Power and Energy, presented the emerging document to Overview and Scrutiny Committee on 9th July this year, which attracted significant interest and positive feedback.

7 ENVIRONMENTAL CONSIDERATIONS

7.1 The central purpose of this draft Strategy is to support the City Council's Air Quality Action Plan, to demonstrate a leadership role in facilitating behavioural change and to support of the central government's objective of the complete electrification of the UK's vehicle fleet by 2050 for the benefit of all.

8 EQUALITY IMPACT ASSESSEMENT

8.1 None

9 DATA PROTECTION IMPACT ASSESSMENT

9.1 None

10 RISK MANAGEMENT

Risk	Mitigation	Opportunities
<p>Property</p> <p>That the proposed locations as set out in the Draft Strategy cannot be used for EV charging points, due to unforeseen constraints.</p>	<p>During the project management phase there will be detailed studies into the viability of each charge site. If the installation is not feasible it won't take place at that location and alternatives will be considered.</p>	
<p>That the uptake in use of these EV Charging points</p>	<p>The Strategy seeks to identify the projected</p>	

<p>is low.</p>	<p>uptake and adjust its recommended number of EV charging points (including phasing) accordingly.</p> <p>That the Cabinet seeks to divest some of the risk incurred by the capital investment required by seeking government grants and third party investment.</p>	
<p>Community Support</p> <p>That community support for the installation of EV charging points is low, due to concerns about EV technology and associated range anxiety issues.</p> <p>That the Strategy falls short of community expectation in the Council delivering an EV infrastructure.</p>	<p>Involvement with local stakeholder groups in encouraging the uptake of EV technology.</p> <p>Adoption of a considered charging policy to incentivise rather than disincentivise the use of EV charge points.</p>	<p>Provide an education programme aimed at supporting behavioural change / perceptions on EV Technology.</p> <p>Formation of a Winchester Travel planning group to encourage sustainable and environmental travel options in the major employers in the city.</p>
<p>Timescales and Project Capacity</p> <p>The Strategy sets out an initial delivery period of 5 years, which is reasonable. However if insufficient resource is allocated to its delivery the project plan will suffer slippage.</p>	<p>Identify delivery options and agree an approach which can ensure delivery in a timely manner.</p>	
<p>Financial / VfM</p> <p>That the capital costs of installing the agreed infrastructure do not represent value for money.</p>	<p>Prior to the commencement of installation the preferred contractor will have been established in accordance with established</p>	<p>A progressive city with a developing EV infrastructure will encourage behavioural change which will make the district an attractive</p>

	procurement practice, which necessitates a significant weighting in favour of value for money.	location to live work and visit, thereby encouraging of more prosperous economy.
Legal None		In complying with national air quality standards, Winchester City Council can ensure that it will not be subject to any central government penalty measures. .
Innovation In not progressing an EV Infrastructure strategy the City Council could miss out on innovative ways to encourage positive environmental behavioural change.	Winchester City Council is working with Hampshire County Council and other sector providers to ensure that the EV network is current and, so far as is practicable, fit for the future.	The Strategy seeks to future proof the infrastructure so that it can be expanded as and when demand dictates.
Reputation The district hosts an engaged and well informed public who regularly demonstrate their interest in environmental and air quality issues. In not delivering viable EV Infrastructure for the City and the wider district, the City Council may be seen as not facilitating or promoting positive change in line with the interests of its public and viewed as not taking its future leadership obligations seriously.	The City Council regularly engages with WinACC and Winchester BID, both of whom are members of the Air Quality Steering Group. The development of the Strategy underlines the Council's commitment to promoting the wider use of low emissions vehicles.	Being a regional leader in the early adoption of an EV charging network, will show that Winchester is a progressive Council.
Other		

11 SUPPORTING INFORMATION:

11.1 The City Council's Air Quality Action Plan as adopted in the Spring of 2017, sets out a time table for the delivery of several core and complimentary measures, which in combination seek to reduce the nitrogen dioxide levels in the city's Air Quality Management Area. Broadly the core measures were identified as those actions which would have a direct and measureable impact on air quality, whilst the complimentary measures would seek to influence wider behavioural shift toward more sustainable and less polluting travel options.

11.2 One such complimentary measure intended to deliver on the City Council's leadership role in facilitating such a behavioural shift for those living and working in the district, is as follows, to:

'Seek to commit to introduce more electric charging points within car parks'

11.3 In seeking to achieve this measure, after a competitive tendering process, Horizon Power and Energy were awarded a contract to write an Electric Vehicle Charging Strategy for the City Council. The brief of the commission was to identify the publically accessible electric vehicle charging needs of the City of Winchester and its wider district, including its taxi fleet. The period of consideration was for the next 5 and 10 years, with the main focus on off street parking in City Council owned car parks, but with some consideration for on street charging. The draft Strategy can be found at Appendix 1

11.4 The brief did not include infrastructure to support the operation of other types of commercial vehicles, such as electric buses. Bus technology is developing all the time and the Council is aware of electric bus trials in other local authority areas. The option of using buses powered other than by conventional means will need to be considered when procuring future bus services operated by the Council, such as those serving the existing and any future Park and Ride sites.

11.5 After predicting the uptake of plug in EVs, the associated charging needs of the EV community and accessing the district and identifying the infrastructural requirements for delivering the proposed EV network, the report has made the following key recommendations.

That in the first 5 years the city council should introduce 46 chargers to serve 57 parking bays as follows:

- Taxi Charge Points 4 Bays (2 x rapid 50kW CHAdeMO / CCS / Type 2 Chargers)
- New Leisure Centre 3 bays (x2 20kW Type 2 Un-tethered Chargers)
- Winchester City Car Parks 25 Bays (23 x 7kW/ 20kW Type 2 Un-tethered Chargers)
- Park and Ride Car Parks 13 Bays (7 x 7kW Type 2 Un-tethered Chargers)
- Rural and Town Car Parks 12 Bays (11 x 7/11kW Type 2 Un-tethered Chargers)

- On Street Parking in AQMA 3 Bays (3 x 3kW Type 2 Un-tethered Pilot Project Installs)

[Note, Charger types/ratings as follows: ref Zap Map <https://www.zap-map.com/charge-points/>

Rapid chargers are one of two types – AC or DC [Alternating or Direct Current]. Current Rapid AC chargers are rated at 43 kW, while most Rapid DC units are at least 50 kW. Both will charge the majority of EVs to 80% in around **30-60 minutes** (depending on battery capacity).

Fast chargers include those which provide power from 7 kW to 22 kW, which typically fully charge an EV in **3-4 hours**. Common fast connectors are a tethered Type 1 or a Type 2 socket (via a connector cable supplied with the vehicle).

Slow units (up to 3 kW) are best used for overnight charging and usually take between **6 and 12 hours for a pure-EV, or 2-4 hours for a PHEV**. EVs charge on slow devices using a cable which connects the vehicle to a 3-pin or Type 2 socket.]

- 11.6 Overall the estimated capital cost of delivery is £250,000 including a 10% allowance for design and management fees.
- 11.7 This draft Strategy also details outline funding options which include:
- **Council Funds** - Direct funding from capital reserves, allowing the City Council to retain full control of the EV Charging assets, allowing the freedom of a simple return on its investment. The Council can chose to adopt its own charging policy to either encourage a faster uptake in use during the inevitable lag phase, or, as may be the case, maximise the rate of return on its investment. Clearly there is a balance to be found in this respect.
 - **Grant Funding** – The Office for Low Emission Vehicles currently provides grant funding opportunities for on street charging infrastructure, and some off street charging, where it can be demonstrated that on street infrastructure cannot be provided. This grant funding has to date been under subscribed, so it is recommended that the City Council thoroughly explores this opportunity.
 - **Commercial Investors** – The Council can seek to engage with the EV charging sector, of which there are several providers that offer to deliver charging infrastructure on the Council estate. Each provider will have its own commercial delivery model, which will inevitably involve varying degrees of control for the Council on the number and type of charging points and any associated charging policy.
- 11.8 It is recommended that Cabinet approve the findings of this draft Strategy and for officers to undertake a feasibility study into more detailed funding delivery options.

11.9 In addition to the physical infrastructure needs and associated costs of delivery, the draft Strategy also sets out several policy considerations, which will need to be addressed in advance of implementation, as follows:

- tariff levied for the use of an EV parking bay;
- tariffs levied on the use of electricity;
- A policy on preferential access to EV Chargers for persons living within the Air Quality Management Area;
- Policy on funding delivery options as already outlined;
- Whether the City Council should invest in taxi infrastructure which will in effect serve local business;
- Whether the City Council wishes to adopt a common solution with adjacent districts to ensure unfettered access.

11.10 In seeking answers to some of these questions the draft Strategy does make some recommendations, and these will be considered as part of a further option appraisal study.

12 OTHER OPTIONS CONSIDERED AND REJECTED

12.1 None.

BACKGROUND DOCUMENTS:-

Previous Committee Reports:-

[CAB2906](#) – Adoption of Winchester City Council’s Air Quality Action Plan 2017 - 2023

[CAB3074](#) – Air Quality Action Plan Progress Report

Other Background Documents:-

[Clean Air Strategy 2018](#) - DEFRA

APPENDICES:

Appendix 1

Electric Vehicle Charging Strategy – Horizon Power and Energy