

## Workplace Chargepoints for Staff and Fleet

To: Environment and Sustainability Committee

Meeting Date: 14th January 2021

From: Steve Cox, Executive Director, Place and Economy

Electoral division(s): All

Forward Plan ref: n/a

Key decision: No

Outcome: To agree the business case for installing electric vehicle chargepoints at Cambridgeshire County Council sites for use by staff, fleet vehicles and visitors.

Recommendation: Members are asked to:

- a) Note the background, progress to date, issues, challenges and opportunities regarding the installation of electric vehicle chargepoints (EVC) at Council buildings.
- b) Approve the business case for EVCs, using the Workplace Chargepoint Scheme, and enable expenditure of up to £120,000 of the £200,000 allocated to chargepoints in the Environment Fund.

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# 1 Background

- 1.1 Decarbonisation of road transport is increasingly necessary to meet local, national and global greenhouse gas emissions targets. Shifting away from Internal Combustion Engine (ICE) vehicles, particularly cars and vans, to electric vehicles (EVs) forms a crucial component to meeting these targets, alongside other measures such as increasing walking, cycling and public transport. However, the transition to a low carbon mode of transport will require upfront provision of infrastructure to stimulate the change.
- 1.2 The Council's Climate Change and Environment Strategy and Action Plan were approved by Full Council in May 2020. This Strategy identifies the transition to low carbon transport as a key area upon which it can aid delivery of County-wide carbon emission reductions, whilst also improving air quality, through providing enabling infrastructure for a shift to electric vehicles. This action to provide electric vehicle infrastructure built upon prior commitments in the Corporate Energy Strategy to explore the shifting of pool cars to electric.
- 1.3 In February 2020, the Council adopted a fourth corporate objective to deliver net zero carbon for Cambridgeshire by 2050 and included a £16million Environment Fund in its budget plan to support delivery of its commitments set out in the Climate Change and Environment Strategy.
- 1.4 The Environment Fund is to implement near-term targets set out in the Climate Change and Environment Strategy, including the pledge that "by 2025... all the Council's car and van fleet will be electric". For Council owned sites, the Action Plan puts forward provision of EV charging facilities (for fleet and staff) and a shift to electric pool and hire cars as key actions, and £200,000 has been allocated to the delivery of this within the Environment Fund.
- 1.5 More generally, the Council has also committed to: "include EV charging at Council offices for staff and visitors, EV pool cars, and use of our assets to contribute to a credible EV charging infrastructure accessible to all". The provision of workplace chargepoints for use by staff, visitors and the Council's fleet will be the first stage of this work. To facilitate the move to an electric fleet, workplace chargepoints are essential.
- 1.6 The intended outcome of this report is therefore to agree the business cases (appendix 0) for workplace chargepoints at the Council offices listed in the appendix, and agree expenditure from the Environment Fund to enable implementation.

# 2 Main Issues

- 2.1 The prevalence of electric vehicles on UK roads is growing, with increasing numbers of new registrations each year: there were over 10,000 new registrations in Cambridgeshire in 2019, of which about half were fully electric. In Quarters 1 and 2 in 2020, already there have been 3,215 fully electric vehicles registered in Cambridgeshire. At the same time the sale of new petrol, diesel cars and vans will be banned from 2030<sup>1</sup> with the ban on new hybrids coming in five years later. EVs produce no carbon and highly reduced particulate emissions at point-of-use, making them a key route to improved air quality and carbon goals, and they form central approaches within the UK's Clean Air Strategy, 25 Year Environment Plan, Road to Zero and the upcoming Transport Decarbonisation Plan.

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<sup>1</sup> Note, the 2030 date was announced on 18<sup>th</sup> November 2020. Further details around the use of hybrids between 2030-35 are due to come forward via consultation over the next year. The previous 2035 date has been used in the business case presented here.

- 2.2 Visibility of accessible chargepoints is essential in driving the transition to electric vehicles, with workplace chargepoints being particularly important for stimulating organisational change. Similarly, they can inspire a wider change in attitudes towards EVs, particularly in conjunction with electrified fleets, by strengthening staff ability to view electrified personal vehicles as ubiquitous while providing the opportunity to interact with the technology without personal expenditure. As a Local Authority this is particularly important as our staff can act as a means to spread confidence in electric vehicles.
- 2.3 Within the Council's organisational carbon footprint 2018/19, approximately 6,061 tonnes CO<sub>2e</sub> originate from transport use (across all emission scopes 1,2 and 3). Encouraging and enabling a fleet and staff vehicle shift from petrol or diesel vehicles to electric through provision of charging infrastructure represents a first step in reducing this figure. This is in line with targets within the Climate Change and Environment Strategy to "reduce the Council's organisational net carbon footprint for scopes 1 and 2 from 1979.28 tonnes per annum in 2018-19 by 50% by 2023" and "to reduce the Council's scope 3 emissions by 50.4% by 2030".
- 2.4 Facilitating Fleet improvements: The Cambs2020 work has identified five locations for pool cars after the move out of Shire Hall: Alconbury Civic Hub; Bernard Sunley Centre, Papworth; Cambridge Professional Development Centre, Scott House and Sackville House. All have parking facilities and the latter four sites would be prioritised for chargepoints to facilitate a shift to EV pool cars. Note, the Civic Hub already has charging facilities planned as part of the construction.
- 2.5 Adult passenger transport is exploring how to switch two of its wheelchair friendly minibuses to EVs. Similarly, the Transformation team is exploring purchase of an electric multi-use minibus for use by Think Communities (note this project is in options appraisal currently). The Library service is already exploring how to transition to an electric fleet through their vehicle lifecycle upgrades.
- 2.6 Workplace Chargepoint Scheme (WCS): Government recognises the financial and technical challenges that provision of EV infrastructure can pose for organisations, and has set up the Workplace Chargepoint Scheme (WCS). Funded by the Office for Low Emission Vehicles (OLEV), the WCS is a voucher-based scheme providing grants for businesses to part fund the upfront cost of the purchase and installation of EV chargepoints at their premises. The contribution is limited to 75% of upfront costs, up to a maximum of £350 for each socket, and up to a maximum of 40 sockets across all sites per applicant. Multiple applications may be submitted until the 40-socket maximum has been reached. Note, dual head chargepoints have two sockets. This funding source has been incorporated into the business case to subsidise the capital cost of the project.
- 2.7 Similarly, HM Revenue and Customs (HMRC) has stated that the provision of chargepoints and/or free charging does not constitute a benefit in kind (HMRC exemption S237A ITEPA 2003).
- 2.8 Locations: An initial site list was agreed at Strategic Property Asset Board. This has been refined based on the quotations received developments in plans for properties. The full list of sites along with their high level costs is available in appendix 6.1. These sites have been cross-referenced with other ongoing projects including: Cambs2020, Renewable Heating Programme and service level fleet improvement ambitions to ensure locations are appropriate and projects can be managed simultaneously. Some sites are locations where work is being undertaken as part of the Cambs2020 programme, where provision of chargepoints is a planning condition. This project incorporates those requirements.

- 2.9 Cambs2020 Spokes works: Cambridge Professional Development Centre is currently fully included in the costing for this project. This site is undergoing refurbishment as part of the Spokes works and may be under a planning condition to install a chargepoint at site. Should this chargepoint be a requirement, the costs to install will be shared between the Cambs2020 project and this one – Cambs2020 will pick up the trenching and electricity upgrade costs. Should the site not have a planning condition, it is likely it will be dropped from this project due to the need for a potentially costly new 100Amp supply to site – the Spokes work will be fully utilising all capacity to site – and the 5 year anticipated lifespan of the property.
- 2.10 Parking Re-configuration: To ensure equality in the ability for all to use the chargepoints, where possible, parking bays will be widened to meet requirements of Blue Badge Bays. This will mean maximum access to the chargepoints for all staff, however, may necessitate the loss of a parking bay.
- 2.11 Business Case: Quotations have been received via the ESPO framework. These incorporate the capital costs of the chargepoint units and installation, and a 3-year operations and maintenance contract (to ensure and enable compliance with the WCS funding scheme). The business case has been developed over a 20year loan term to achieve a balance of payback within the lifespan of the chargepoints and a reasonable charging fee. A 10year case had been explored and ruled out as this put the fee to charge at an unviable level. The cost summary for the 20year loan term is below, with the full business case available in section 0. The business case was approved at Capital Programme Board on 23<sup>rd</sup> November 2020.

Total Capital Cost	£99,460
Minimum Fee to Charge (Yr 1)	22.7p/kWh <sup>2</sup>
Payback	17.63years
IRR	3.80%
NPV	£8,092

2.12 *Assumptions*: Assumptions have been incorporated into the business case on a range of unknowns:

- *Utilisation*: Modelled based on two assumptions taken from government projections:
  - 1) 100% of new car sales to be zero emission by 2035
  - 2) 10-year vehicle/fleet turnover rate

These means that by 2045 it can be expected that 100% of vehicles driven will be electric. Taking historic DVLA licensing data, the proportion of the fleet that is plug-in was calculated then used to fit a sigmoid curve, representing the increasingly rapid uptake already being realised with a levelling off to 2045.

This curve is then applied to CCC staff numbers and factored down by 10% to represent the proportion of charging that takes place at work (rather than elsewhere) to put a figure

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<sup>2</sup> It is the intention that all workplace chargepoints across the Council's assets will have a uniform charging structure and cost across comparable chargepoints, regardless of the project that led their installation. This may mean prices will fluctuate more than outlined in the business case for this project. In all instances, the intention will be to charge staff the minimum possible.

on the number of vehicles in the grey fleet charging at work. A 1-year lag<sup>3</sup> has also been applied to incorporate a delay in uptake due to impacts of Covid-19.

- *Fees for use:* Staff will be charged on a cost recovery basis and fleet vehicle use will be recharged to the relevant budgets. The price will be set based upon the minimum p/kWh required to cover costs and will be reviewed annually. The year 1 fee of 22.7p/kWh. This appears to be on par with 7kWh public chargepoints which have pricings ranging from 18p/kWh – 30p/kWh.
- *Capital Cost:* Costs have been established via a competitive tender process. These assume there will be no unanticipated requirements for electricity supply upgrades or additional trenching. A 10% contingency has been included in the business case for small cost uplifts.
- *Savings:* Notional fuel and carbon savings (based on the “average car” per mile emissions used in the Green House Gas Protocol) have been priced for information purposes. These have not been incorporated into the financial case presented but illustrate the additional savings that could be realised as a result of this project. Any electrification of the fleets will also support this business case by creating a guaranteed base-demand for the chargepoints.

2.13 Electricity Capacity: To install chargepoints, some sites may require upgrades to their electricity supply, however this is being avoided wherever possible. Many of these sites will also be in the renewable heating project that also falls within the remit of the Climate fund – these may also necessitate electricity upgrades. Where possible these will be combined to prevent repeat upgrades. Note additional costs for electricity upgrades are not included in the business case – these are highly variable depending on a site’s existing electrical infrastructure. It is anticipated that in most instances installation of a 7kW dual head chargepoint will not require significant upgrades and sites with no upgrade requirements have been prioritised. The suppliers have indicated in their tender returns which sites may require an upgrade, which have been considered in producing the proposed business case.

2.14 Risk: Key project risks and their mitigations are described in appendix 6.3

### 3 Alignment with corporate priorities

#### 3.1 A good quality of life for everyone

There are no significant implications for this priority. However, improvements in air quality has benefits to the quality of life of our staff and residents.

#### 3.2 Thriving places for people to live

There will be a benefit to workers involved in the projects. The sites having EVCs will benefit staff, services and visitors who have or are considering switching to electric vehicles by delivering easy secure access to charging facilities.

#### 3.3 The best start for Cambridgeshire’s children

Some of the sites on the list are used by services educational and recreational services for children with severe disabilities. These services are exploring upgrading their wheelchair-accessible mini-buses to electric, providing a better sensory experience for service users. These can only be delivered with provision of the Chargepoint infrastructure.

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<sup>3</sup> There is little conclusive data available on the effect of Covid on vehicle purchases, however a “best guess” is that it will initially slow then rapidly pick-up again. This is the approach being taken by UK Power Networks, Cambridgeshire’s electricity network operator, in their modelling for EV uptake in their Future Energy Scenarios.

- 3.4 Net zero carbon emissions for Cambridgeshire by 2050  
These projects will help the Council to meet its ambitions in relation to this priority, as set out in paragraphs 1.1, 1.2 and 2.3.

## 4 Significant Implications

### 4.1 Resource Implications

Ongoing maintenance and management of the chargepoints will move to the property team after the first 3 years, as described in 2.11. These services can be procured, and it is anticipated use of the chargepoint will cover these costs in the long term.

### 4.2 Procurement/Contractual/Council Contract Procedure Rules Implications

None. A further competition under the ESPO Framework 636 – Electric Vehicle Infrastructure was undertaken.

### 4.3 Statutory, Legal and Risk Implications

Key risks include COVID-19-related delays to materials supplies or contractor staff shortages, and electricity supply upgrades. These will all be monitored and managed by the project team.

### 4.4 Equality and Diversity Implications

None. A full Equality Impact Assessment has been completed and mitigations have been incorporated into the project - Chargepoints are being located within carparks such that there is no impact on provision of disabled parking spaces and the bays served by the chargepoints will, where possible, be increased in size to accommodate those who might normally use a blue-badge bay. Additionally, the project facilitates improvements to fleet vehicles that can significantly improve service delivery eg. EVs are quiet which significantly benefits those service users with disabilities.

### 4.5 Engagement and Communications Implications

None, however internal staff communications will be required.

### 4.6 Localism and Local Member Involvement

This project is an action in the Climate Change and Environment Strategy, developed with a cross-party member working group.

### 4.7 Public Health Implications

The following bullet points set out details of significant implications identified by officers:

- The works will need to be undertaken whilst minimising disruption and still adhering to social distancing requirements that may still be in place at the time, due to the COVID-19 situation.
- Enabling and promoting minimisation of the Council's contribution to air quality challenges will have public health benefits in the long term.

#### **Have the resource implications been cleared by Finance?**

Yes

Name of Financial Officer: Sarah Heywood

#### **Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the LGSS Head of Procurement?**

Yes

Name of Officer: Gus de Silva

**Has the impact on statutory, legal and risk implications been cleared by the Council's Monitoring Officer or LGSS Law?**

Yes

Name of Legal Officer: Fiona McMillan

**Have the equality and diversity implications been cleared by your Service Contact?**

Yes

Name of Officer: Elsa Evans

**Have any engagement and communication implications been cleared by Communications?**

Yes

Name of Officer: Bethan Griffiths

**Have any localism and Local Member involvement issues been cleared by your Service Contact?**

Yes

Name of Officer: Emma Fitch

**Have any Public Health implications been cleared by Public Health**

Yes

Name of Officer: Iain Green

## 5 Source documents

### 5.1 Documents

1. Full Council meeting minutes – February 2020
2. Cambridgeshire County Council Climate Change and Environment Strategy and Cambridgeshire County Council Annual Carbon Footprint Report 2018-19
3. Department for Transport, VEH0132: Licensed ultra low emission vehicles by local authority: United Kingdom
4. Full Financial Business case including EV uptake modelling

### 5.2 Location

1. <https://cambridgeshire.cmis.uk.com/ccclive/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1102/Committee/20/Default.aspx>
2. <https://www.mlei.co.uk/climateenvironment/climate-change-and-environment-strategy>
3. <https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01>
4. [Available on request](#)

## 6 Appendix

### 6.1 Site List

	Site	Town	Capital Cost	Notes
1	St Ives Youth Centre	St Ives	£5,893	
2	Huntingdon Community Centre	Huntingdon	£4,246	
3	March Community Centre	March	£5,894	
4	Sawtry Community Centre	Sawtry	£3,251	
5	Amundsen House	St Ives	£6,894	
6	Awdry House	Wisbech	£5,894	
7	Bernard Sunley Centre	Papworth Everard	£6,483	
8	Buttsgrove Day Centre / Hillrise	Huntingdon	£5,886	
9	Cambridge Professional Development Centre	Cambridge	£6,918	Site will require a potentially costly electricity upgrade, therefore chargepoint will only go ahead if a planning condition of Cambs2020 projects. If so, Cambs2020 will pick up the trenching costs (£4,234) plus any electricity upgrades required.
10	Hereward Hall	March	£5,894	
11	Sackville House	Great Cambourne	£4,666	Assuming capacity at roof distribution board and reconfiguration of car park
12	Scott House	Huntingdon	£3,034	
13	Signet Court	Cambridge	£5,894	
14	Speke House	St. Ives	£6,040	
15	Vantage House	Huntingdon	£6,457	
16	Larkfield Day Centre	Ely	£6,742	
17	Stanton House	Huntingdon	£5,894	
18	Horizon Resource Centre	Cambridge	£5,894	
		Grant	£12,600	36 sockets at £350 grant each
		Contingency	£10,187	10%
		<b>Total</b>	<b>£99,460</b>	

### 6.2 Business Case Summary - See spreadsheet attached



### 6.3 Summary risk register – Key risks only

Risk	Impact	Likelihood	Severity	Rating	Mitigation
Assumptions in the business case (2.12) are not realised.	Revenue generated through chargepoint use is not sufficient to cover revenue costs and payback within the loan period	medium	high	high	<ul style="list-style-type: none"> <li>• Model for EV uptake and staff utilisation of chargepoints developed using best available data</li> <li>• Model developed to be conservative and build in delays in EV uptake amongst staff</li> <li>• Closely monitor chargepoint use and fee to charge to enable changes the charging fee to be implemented</li> </ul>
Significant uplift in costs	Additional costs put pressure on the business case, reducing project viability	low	medium	medium	<ul style="list-style-type: none"> <li>• Contingency funds have been incorporated into CAPEX (10%)</li> <li>• Procurement allows individual sites to be removed from the project should circumstances, including prohibitive capital costs, be identified</li> </ul>
Workplace Chargepoint Scheme Grant funding not received	Additional project costs of £12,500 make project un-viable	low	high	medium	<ul style="list-style-type: none"> <li>• Eligibility criteria of the grant have been followed when selecting sites</li> <li>• Chargepoints have been specified to meet WCS funding eligibility criteria</li> <li>• Confirmed that the Council has not already used any of the 40-socket allocation specified in the grant</li> </ul> <p><i>Note: should the grant not be received the project would be postponed until fleet improvements are underway</i></p>
External events, eg CV-19 lockdown, impact project delivery	Project delivery is delayed.  Potential uplift in costs.	low	medium	medium	<ul style="list-style-type: none"> <li>• Close project management with contractors to ensure safe modes of working and contingencies developed</li> <li>• Monitoring of government guidelines</li> </ul>