

Annex A

Cotswold District Council

Sustainable Transport Strategy: Delivering Electric Vehicle Charging Points

Introduction

The delivery of a carbon neutral district is a priority for the Council and following the declaration of a Climate Change Emergency in 2019, the Council adopted a Climate Change Strategy in September 2020 and is also focused on Greening the Local Plan to embed a more sustainable approach to strategic development and transport across the district.

The Council has highlighted the need to further develop and deliver the Local Transport Plan Review and is considering actions it can take to positively contribute to a modal shift to more sustainable forms of transport. As part of this drive, the Climate Change Strategy action plan sets out the need to develop and deliver a Strategy for Electric Vehicle Charging Points.

This Strategy and the delivery plan are initially focused on electric vehicles but will continue to develop and expand and its initial adoption should be seen as phase one in an emerging Transport Strategy.

Achieving a modal shift

Given the predominantly rural nature of the district and its dispersed population, the Council understands that a large part of the reliance on cars for transport in the Cotswolds is borne from the lack of suitable alternatives and a need to access goods, services, schools and employment in our Market Towns and larger villages.

The Council will carry out further work to gather data and understand the constraints and incentives which force a reliance on cars and consider how it can encourage people to reconsider the way they travel. It will support and develop the Local Transport Plan and embed green travel within the Local Plan and other relevant council policy documents. Achieving policy change will enable the Council to require higher standards and specific provisions in new developments and consider opportunities to encourage people to walk and cycle more and to utilise existing public transport services.

The case for electric vehicles

There is overwhelming evidence that petrol and diesel-powered vehicles cause pollution, which contributes to poor air quality and is dangerous to public health. For these reasons policy makers and vehicle manufacturers or other transport innovators are working to build interest in and around the use of alternative fuels e.g. electricity, biomethane and hydrogen.

About a third of CO₂ emissions in the UK come from transport, with petrol and diesel vehicles being major contributors to this.

| | Kg of CO₂ per mile | Fuel |
|------------|--------------------------------------|-------------|
| Medium car | 0.265 | Diesel |
| | 0.299 | Petrol |

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|--|-------|-------------------------|
| | 0.286 | LPG |
| | 0.112 | Plug in hybrid electric |

Data source: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>

Providing an accessible network of electric vehicle charging points will play a vital role in facilitating the uptake of electric vehicles, but this should be considered part of the solution in moving towards healthier and more sustainable modes of transport, rather than a wholesale solution as reducing car-dependency would have a more lasting and holistic impact on health, air quality and carbon emissions.

The UK has seen a surge in demand for ultra-low emission vehicles, including electric vehicles. Ultra-low emission vehicles are broken down into three main types: Battery Electric Vehicles, Plug-in Hybrid Electric Vehicle and Hydrogen Fuel Cell Electric Vehicles. The fastest growth is occurring in plug in hybrid electric vehicles.

- In total, 37,850 electric cars were registered in the UK in 2019
- This was a rise in demand of 144% compared to the previous year

Hybrid and plug-in electric vehicles are tipped to account for over 10 percent of car registrations in the United Kingdom in 2020. A range of electric vehicle charging infrastructure will be required to meet the varied needs of residents and commercial electric vehicle users. These will need to be located in appropriate locations in residential streets, car parks and popular destinations such as high streets, shopping and leisure centres.

Strategic aims

Around half the total emissions of greenhouse gases in the Cotswold District are due to road vehicles, therefore road transport is a key focus of the Council's decarbonisation efforts, consistent with the Council's Climate Emergency Strategy.

Ultimately, greenhouse gas emissions from road transport will need to be reduced by a combination of less travel (fewer, shorter journeys), modal shift (prioritising active travel such as cycling and walking, and public transport, over private car use), and technology change.

Consistent with the Council's Climate Emergency Strategy, it is important to encourage the move to EVs more quickly than 'natural' market sentiment would otherwise deliver. EV charging infrastructure in the District should, as far as possible, be installed ahead of the growth curve of residents' purchase and use of EVs, rather than in reaction to it.

Key objectives are:

- Support an integrated network of EV charge points (rapid, fast and slow) to match current and future demand.
- Support and encourage workplace charging, leading by example with the introduction of EVCPs at the Council's offices and the operational depot.
- Promote innovative technology such as electric bikes, motorbikes and taxis.
- Facilitate innovation by helping providers and manufacturers of electric vehicles and charging infrastructure to test new products in our rural area.

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- Adopt a Strategy framework that encourages or where feasible, requires private developers and landowners to provide EV charging to encourage residents and businesses to switch to low carbon vehicles.
- Raise awareness of the EV market so people can understand the options for and benefits of EV ownership
- Ensure the charging network that the Council installs remains fit for purpose, user friendly, can cater for future expansion and is adaptable to emerging technologies;
- Encourage more sustainable travel, including electric vehicles for any essential car trips, through supporting policy frameworks and initiatives
- Support and encourage an innovative approach by residents and businesses to make EV charge points available to other EV drivers, where appropriate.

Policy Context

The Climate Change Act 2008 saw the UK tasked with reducing emissions by at least 80% by 2050 but in June 2019 the UK set a target requiring all greenhouse gas emissions to be reduced to net zero by 2050. However it is clear that we need to act faster and the Council's Climate Emergency declaration was in recognition of the need to take active and positive steps to affect change.

In 2019 the Government set out to ban sale of all diesel and petrol cars and vans from 2040, this was later brought forward to 2035, and in the Government's plans for carbon emissions reduction announced in November 2020, this date was further brought forward to 2030. The Government's Clean Air Strategy 2019 sets out plans to meet ambitious legally binding international targets to reduce emissions of the 5 most damaging air pollutants by 2020 and 2030.

Current charging Infrastructure in Cotswold District

In 2015 the Council received government funding and installed one EVCP at the Beeches car park Cirencester and another at the car park in Moreton in Marsh. Data shows use of these points has increased incrementally year on year (Annex A).

ZapMap shows the current network of charge points in the Cotswolds is very limited. Whilst some hotels have provision for guests, the only other points provided for public/customer use are those located at supermarkets and fuel stations in Cirencester and Bourton on the Water.

Types of charge point

Charge points vary as to how quickly they can charge an electric vehicle. Ultra-rapid charge points are the quickest way to charge an EV, with powers from 150kW up to 250kW (up to about 1,000 miles range per hour). However the network of such chargers is not (yet) widespread, and not all cars are capable of using these chargers.

Rapid charge points are the next quickest way to recharge a vehicle, typically recharging a vehicle to 80% in around 30 minutes. However, rapid (and ultra rapid) charge points are the most expensive to use (similar to expensive petrol or diesel fuel at motorway services), and they cannot be installed at home.

Fast charge points are ideal when vehicles are parked for a few hours, so during longer shopping trips or whilst at work.

Slow charge points are often the cheapest to use and are suitable when vehicles are parked for longer periods, such as during working hours or overnight.

The speed the vehicle recharges will be affected by the charge point speed available and also how fast the vehicle itself can recharge.

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| | Slow (3 - 7kW) | Fast (7 - 22 kW) | Rapid (up to 50kW) |
|-----------------------------------|----------------|------------------|--------------------|
| Charge time | 4 - 8 hours | 2 - 4 hours | 25 - 40 mins |
| Vehicle range added in 15 minutes | 3 - 6 miles | 6 - 20 miles | 35 - 40 miles |

The faster the charge point the more expensive it is to install, so the Council needs to make a considered decision on the type of charge point to install based on the location and use on a site by site basis.

Electric Vehicle Charging Infrastructure delivery

This strategy will cover the installation of EVCP across the Council's estate including sites available for public access and those with access limited to tenants.

The Council has a role in the direct installation of technology and in the facilitation and encouragement of residents and businesses in the switch to greener modes of transport.

The Council plans to ensure an infrastructure of EVCP that can be used by residents, workers and visitors to our towns and parishes, so that we build confidence in investment in electric vehicles.

We will seek to provide an EV charging network that has standard charging posts and payment systems to ensure better usability and convenience, making the experience of charging better for the user. The charging points will be placed in locations that are easily accessible to ensure good uptake.

We will deliver phased installations to provide a good geographic spread, starting with our larger towns and then expanding this to cover more rural locations. Our initial plans will be for installations in public car parks where the Council has ownership of the land to ensure we can move swiftly and are not held up by land ownership issues. However, we will be exploring opportunities for installations on land owned by Town and Parish Councils or others, where this would optimise provision or in locations where the District Council does not have any car parks or other land it could utilise.

The existing charge points in Cirencester and Moreton in Marsh are ageing and require replacement if faults and downtime are to be minimised. Manufacturers advise that charge points typically have a life of around 5 years. These charge points were installed in 2015 and the EVCP in Cirencester has experienced increasing breakdowns in the last year which can be difficult to resolve. These charging points will be replaced in Phase 1 of EVCP installations.

Charging off-street - Public car parks

The Council can install chargers in its public car parks which can be used principally by shoppers, visitors and workers during the day but will also benefit residents overnight, when parking is free. All of the Council's car parks have nearby residential properties in a historic townscape where private off street parking and on-street parking is very limited.

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The Council will:

- **Install a network of charging points access its car parks, starting with the first phase in larger settlements.**
- **In a second phase the Council will identify locations and install points where the Council does not have public car parks but where it owns alternative land or the Town or Parish council or other landowners own land that could be used to create parking bays with EVCP.**
- **Replace the aging EVCP units in the Beeches car park Cirencester and Old Market Way car park, Moreton in Marsh.**

Charging at home

The majority of charging will be done at home, often overnight. The cheapest and most convenient way is to install a dedicated chargepoint. Whilst it is possible to use a regular UK three-pin socket, it is much slower than a dedicated charge point and may involve running charging cables from inside the home. Extension cables should not be used. Some energy companies offer tariffs specifically for EV drivers.

The Council will:

- **Encourage homeowners to install EVCP by advertising funding streams available and the benefits of electric car ownership.**
- **Encourage developers to install EVCP on all new build properties where layout enables vehicle charging.**
- **Require EVCP to be installed on any new build housing development it delivers directly (subject to design constraints).**

Charging on-street

Where residents do not have off-street parking (driveways/garages) charging an EV near to their home will be more challenging.

The Council will:

- **Work with the County Council to consider how funding streams can be accessed, and Towns and Parishes supported, in the delivery of on-street charging.**

Charging for businesses

Some businesses will have business vehicles or have staff who wish to use an electric vehicle who either travel long distances to work or who are unable to charge at home, some will also have clients or customers who wish to charge whilst they are on the premises.

The Council will:

- **Encourage businesses to install EVCP by advertising funding streams available and the benefits of electric car ownership. Leading by example with conversion of its own fleet and providing case studies to illustrate the benefits achieved.**

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- **Work with taxi drivers to secure EVCP provision at suitably located taxi ranks or transport hubs.**

Greening the Fleet

Waste and recycling collections across such a large geographic area mean that this operational fleet makes up a large percentage of the carbon emissions which result from the Council's own operations.

The Council has purchased a hybrid vehicle which is now used by Ubico vehicle maintenance engineers to attend vehicles in the district that have broken down or require assistance. This first step will provide valuable data and insight into the challenges of operating an electric fleet with a limited range, in a large rural area.

EVCP will be installed at the depot in the first phase of installations to facilitate the charging of this pilot vehicle and enable an expansion of the electric fleet over the next couple of years with consideration of electric alternatives when every vehicle reaches its end of life and is replaced as part of the fleet replacement program.

The Council will:

- **work with its partner Ubico Ltd to be innovative and push the boundaries for greening its fleet whilst managing the significant costs associated with transitioning to electric, hydrogen or hybrid vehicles.**

The Council operates a small number of pool cars and it was previously planned that these should be replaced with electric or hybrid vehicles. The Pandemic in 2020 has seen a shift in the way people work, especially increased homeworking. The introduction of an Agile Working Strategy, which significantly reduces the amount of travel staff undertake, is beneficial from a cost and carbon perspective. There is however still a need to carry out site and premises visits which are routinely undertaken by specialists within services such as Planning, Building Control and Environmental and Regulatory Services.

The Council will:

- **Review the need for pool cars in light of the Agile Working Strategy. If pool cars still present benefits, the Council will replace this fleet with electric or hybrid vehicles. For leased vehicles this will take place when the leases are renewed.**

Charging for tenants

The Council owns a number of commercial properties which it rents to businesses. Some of these include parking which is for the sole use of that tenant and other sites include parking which is for the mutual use of multiple tenants and remains in the control of the Council. As the Council delivers its Investment Recovery Strategy the number of sites owned by the Council may increase so a clear policy is required:

Parking controlled by tenant

In this situation the parking is managed by the tenant within the terms of their lease.

The Council will:

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- **Encourage the installation of EVCP but require that the tenant seeks the Council's consent through a Licence to Alter, as it would with any material change made to the land or property, within the terms of the lease.**
- **Waive the costs usually associated with a Licence to Alter of £450 plus VAT (estimate), for the installation of EVCP.**

Parking benefitting multiple tenants

In this situation with tenants sharing a parking area, the Council will install an EVCP(s) for the benefit of the tenants. These installations will be prioritised following initial engagement with current tenants to gauge their level of interest in EVCP. EVCP will not be installed where there is no current demand as they will not be utilised however where an EVCP is being installed nearby, cabling may be installed to facilitate a charger in the future.

Priority will be allocated on the following basis:

1. Tenant already has electric business vehicles
2. Tenant wishes to purchase electric business vehicles
3. Tenant or tenant's employees have personal electric vehicles
4. Tenant or tenant's employees wish to purchase personal electric vehicles/visitors to premises have electric vehicles.

The Council will:

- **Install EVCP for the benefit of its tenants where the parking area used by the tenants remains in the Council's control.**

Whilst the Council will fund the initial installations, the tenant will pay per use of the EVCP, with charges including a sum to cover the future cost of replacement, which will be placed in a sinking fund.

Proactive change

Whilst retrofit of EVCP to buildings and car parks is a positive step, the Council will be pushing the boundaries of Building regulations and planning policy to ensure we require a high standard of new build residential and commercial properties, which include green technology such as EVCP.

Whilst the County Council is responsible for the Local Transport Strategy the District Council wants to be more proactive in its stance on modal shift and drive change in this area, taking a leading role at a local level, through the development of a Sustainable Transport Strategy. The strategy will be accompanied by an Implementation Plan that sets out how and when its proposals will be delivered and both documents will be subject to public consultation. This is therefore likely to inform the future development and implementation of the EVCP Strategy.

The Council will:

- **Install EVCP in any new car parks or car parks that are redesigned/resurfaced. The first example of this is the EVCP installed in the new Whiteway Carpark, Cirencester.**
- **Install EVCP for any buildings or sites it develops or converts, where the location of parking and land ownership makes it feasible to do so.**
- **Actively consider how greener modes of transport can be promoted through its developments, through their use or design.**
- **Develop a Sustainable Transport Strategy that supports EVCP infrastructure delivery and making the Local Plan 'Green to the Core' whilst complementing the County Council's Local Transport Strategy.**

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Innovation and new technology

The Council will explore options to procure EVCP from suppliers using renewables and with strong environmental policies which they demonstrate in their business delivery.

The Council will not limit its plans to EVCP installations, it will look creatively and practically at other technologies that would benefit the district and help deliver against its Priorities. This will include, for example, installation of solar sun shades in car parks.

Hydrogen Fuel Cell Cars

Hydrogen fuel cell cars have batteries onboard which store hydrogen and oxygen and power the vehicle with chemical reactions between the two elements to create water and energy. Sometimes known as fuel cell electric vehicles (FCEVs), they have exhaust pipes but the only thing that escapes from them is water. The cars need refuelling, but with hydrogen rather than petrol or diesel fuel. For each fill of hydrogen, the car will be able to travel 200-250 miles.

There are benefits to hydrogen that outweigh electric — hydrogen fuel cells are much lighter than powerful batteries, they have a slightly better range and they can be topped up much more quickly than charging an electric vehicle which provides advantages for public transport and businesses that can't afford vehicle downtime. However, they are considerably more expensive than electric vehicles, there is a lack of recharging/refuelling stations available, which is also more expensive to install, and they cannot be refuelled at home, which has meant take up has not been significant to-date. It should also be noted that CO₂ emissions from an electric vehicle over its lifetime are lower than a Hydrogen fuel cell vehicle as the majority of hydrogen is generated using fossil fuels, through methane steam reforming.

Whilst the Council has no plans to install Hydrogen fuelling stationing in the short term, it recognises that this technology and other as yet unknown technologies will continue to develop and it will therefore continue to review the best options available to help promote a transition to greener modes of transport.

Installation costs

The Council has allocated £600,000 in the budget for 2020/21 and £150,000 each year thereafter until 2024/25 for the delivery of this strategy.

Costs for the installation of EVCP will vary by site. Whilst the EVCP units themselves will come at a standard price, the majority of the cost will be the ground works necessary to excavate, install cabling and connect to the electrical network. In some cases feeder pillars or new substations will be required which will significantly increase costs. Site surveys will therefore need to be completed by the EVCP installers, with quotations obtained from the Distribution Network Operator (DNO).

The Government is offering funding for EVCP installations. Support available in September 2020 is set out in Annex B to this Strategy but it should be noted this will be subject to change.

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Accessing and paying at public charge points

There are various chargepoint networks in the UK including Pod Point, Chargemaster, Ecotricity and Charge your Car. Access to charging is usually through a radio frequency identification (RFID) card or a smartphone app, although an increasing number of charge points accept contactless credit or debit card payments. In England, each chargepoint operator has a different RFID card.

New regulations came into force in November 2018 that make every public chargepoint accessible to anyone, regardless of pre-existing network membership. The aim is to increase driver confidence in the chargepoint network across the UK.

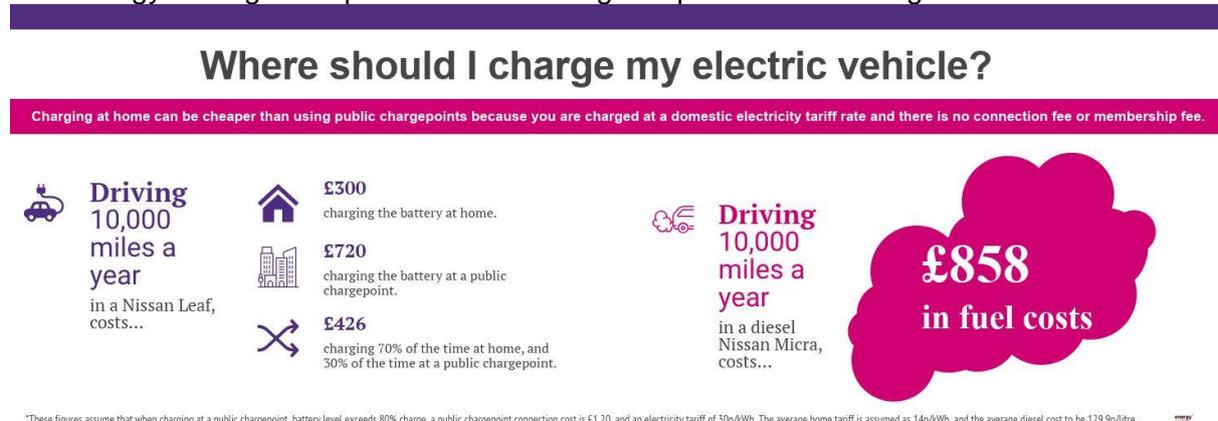
The cost of a charge normally includes a standard connection fee plus the amount of electricity consumed, multiplied by the chargepoint or network's electricity tariff (price per kW).

The Council will:

- **Seek to consolidate the contracts it has in place and the charging networks it uses to simplify the service for users. Ensuring a user friendly, easy to access, charging service.**

Fees for charging will be reviewed annually and be set based on the cost of operating the service.

The Energy Saving Trust provide the following comparison for running costs:

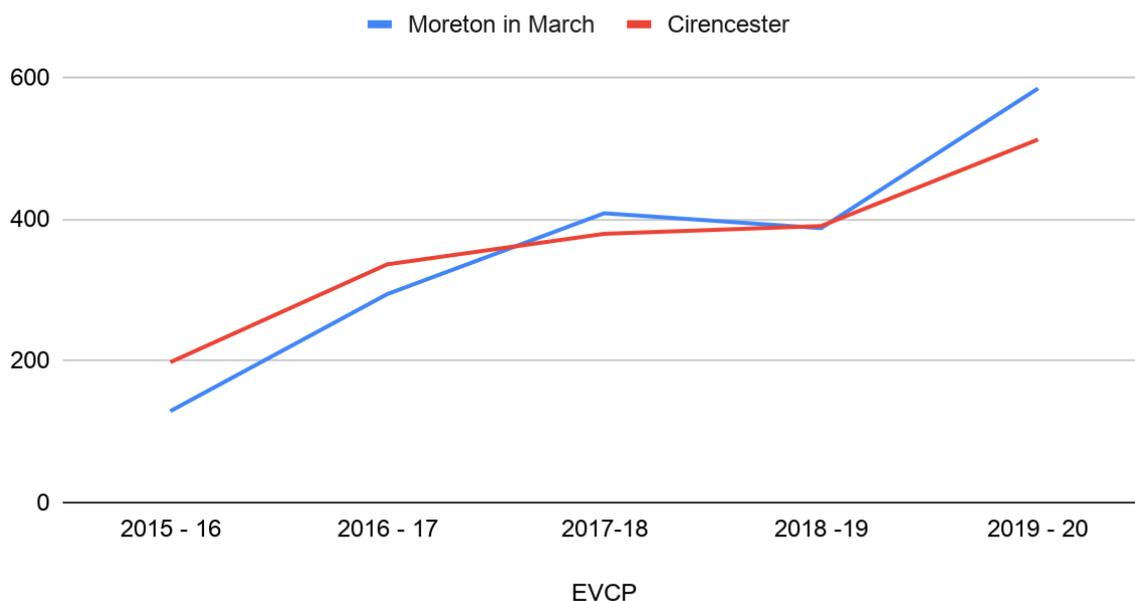


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Annex A - Use of existing charging points

The Chart shows the annual number of chargepoint uses by location since installation in 2015.

Moreton in March and Cirencester



Annex B - Existing Government Funding streams

Home Charging

The OLEV [Electric Vehicle Homecharge Scheme](#) covers up to 75% of the costs (capped at £500, inc VAT) of installing a home chargepoint. Information on the [eligibility criteria](#), a list of [approved installers](#) and [chargepoint models](#) can be found:

<https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles#electric-vehicle-homecharge-scheme>

Workplace Charging

The Workplace Charging Scheme is a voucher-based scheme that provides support towards the up-front costs of the purchase and installation of electric vehicle charge-points, for eligible businesses, charities and public sector organisations.

Application forms for vouchers can be found here:

<https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles#workplace-charging-scheme>

On-street Residential Charging

The On-street Residential Chargepoint Scheme (ORCS) provides grant funding for local authorities towards the cost of installing on-street residential charge-points for plug-in electric vehicles.

Guidance is provided here:

<https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles#on-street-residential-chargepoint-scheme>

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Annex C - Delivery Plan

| Action | Proposals | Timeline | Funding |
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| <p>Installation of EVCP in Council owned car parks, Phase 1 - Market towns and villages with car parks:</p> <ul style="list-style-type: none"> • Cirencester • Tetbury • Bourton on the Water • Stow in the Wold <p>Replacement of existing old EVCP with expansion to provide additional points:</p> <ul style="list-style-type: none"> • Moreton in Marsh • Beeches car park Cirencester | <p>Procurement via mini tender using the Crown Commercial Services Procurement Framework</p> | <p>Mini tender commences January 2021</p> <p>Contract award February/March 2021</p> <p>Phased delivery plan and site specific surveys March/April 2021</p> <p>Report to Council May/June seeking funding for installations</p> <p>Installations commence Summer/Autumn 2021</p> | <p>Capital programme £600,000 for 2020/21</p> |
| <p>Installation of EVCP in larger towns and villages without Council owned car parks, Phase 2 (subject to suitable agreements being secure with third parties):</p> <ul style="list-style-type: none"> • Fairford • Lechlade • Northleach • Chipping Campden | <p>As above - contract is 5 years (plus 2 year extension) for phased delivery</p> | <p>Dialogue with Town and Parish Councils and other landowners to commence January 2022</p> | <p>Capital programme £150,000 per year for 2021/22 - 2014/15</p> |
| <p>Installation of EVCP in smaller towns and villages without Council owned car parks, Phase 3 (subject to suitable agreements being secure with third parties):</p> <ul style="list-style-type: none"> • Andoversford • Bibury | <p>As above - contract is 5 years (plus 2 year extension) for phased delivery</p> | <p>Will be commenced once Phase 2 delivery is agreed and installation commenced.</p> | <p>Capital programme £150,000 per year for 2021/22 - 2024/25</p> |

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| <ul style="list-style-type: none"> • South Cerney • Kemble • Down Ampney • Upper Rissington • Willersey • Blockley | | | |
| Installation of EVCP at Packers Leaze Depot to facilitate greening the fleet -included in Phase one of EVCP delivery | Procurement via mini tender using the Crown Commercial Services Procurement Framework | As above - for Phase 1 | |
| Installation of EVCP at leased properties with communal parking areas | Procurement via mini tender using the Crown Commercial Services Procurement Framework | As above - for Phase 1 - this will form a rolling programme | Capital programme £150,000 per year for 2021/22 - 2024/25 |
| Appoint Sustainable Transport Officer and Commission Sustainable Transport Strategy | Strategy development will be outsourced. Strategy delivery will be aligned with Local Plan preparation. | From January 2021 | Local Plan earmarked reserves |
| Develop Communication strategy for promoting EV use and EVCP installation to residents and businesses | Strategy will identify key messages, stakeholders and communication channels | Launch focused on adoption of Strategy in January 2021 and then further promotion following appointment of EVCP installer and decision on funding allocations for site specific installations in April/May | Revenue base budget |
| Review EVCP fees and charges to reflect new contracts and all relevant costs included in offering an EVCP service | | July 2021 to inform budget process | Revenue base budget |
| Consolidate contracts for EVCP charging, back office and maintenance contracts | Contract for EVCP at Whiteway car park Cirencester will end Autumn 2021 | December 2021 | Revenue base budget |
| Ensure new or redeveloped public car | | Ongoing | Linked to project |

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| parks have EVCP installed | | | specific funding |
| Install EVCP in new developments or conversions undertaken by the Council, including any affordable or social housing development, where location of parking permits. | Depending on property/site design this may be home/building EVCP or communal car park EVCP. | Ongoing | Linked to project specific funding |
| Establish demand for electric charging from the taxi trade and consider feasibility of EVCP installation at taxi ranks or transport hubs. Support or lobby for provision. | | TBC - will be linked to work on Sustainable Transport | Revenue base budget |
| Embed electric vehicle provision within the Ubico fleet replacement programme | Hybrid fitters van now being used. Tender acceptance reports now include specific decision on fuel types/green alternatives | December 2020 and ongoing | Cost of fleet replacement included in Capital programme |