



West Devon Borough Council

Electric Vehicle Strategy 2023-2025

October 2023



West Devon
Borough Council



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Foreword

Our corporate strategy, a Plan for West Devon recognises the task we face in tackling climate change. Transport is among the highest cause of emissions in our Borough.

In an era defined by rapid technological advancements and a growing global consciousness about the impact of human activity on our planet, the way we approach transportation is undergoing a profound transformation. As we stand at the intersection of innovation and environmental responsibility, it is with great pleasure and optimism that I introduce this Electric Vehicle (EV) Strategy.

Our strategy and action plan outlines our proposed approach to developing and implementing an EV charging infrastructure that supports the needs of our community.

We're aiming to help provide convenient and accessible charging solutions that encourage the adoption of electric vehicles, to reduce greenhouse gas emissions.



Cllr Lynn Daniel
West Devon
Borough Council
Lead Member
for Climate Change



**West Devon
Borough Council**



Introduction

West Devon Borough Council declared a Climate and Biodiversity Emergency in May 2019. Following this a Climate Change and Biodiversity Strategy was adopted in December 2020.

The Council has committed to the following aims:

- To reduce its organisational carbon emissions to net-zero by 2030;
- To work with partners through the Devon Climate Emergency Response Group to aim to reduce the Borough of West Devon's carbon emissions to net-zero by 2050 at the latest;
- A 10% Biodiversity Net Gain in the habitat value of its green and wooded public open space by 2025.



Growing
our natural environment

As a proportion of overall emissions, **Transport emissions account for around 27% of all emissions** in West Devon and as opposed to other sectors, hasn't seen much of a reduction. The Council's Climate and Biodiversity Strategy recognises that a **reduction in total vehicle miles travelled and electrification of surface transport is needed** to meet both climate and air quality goals, and that Electric Vehicle (EV) charging infrastructure in West Devon needs to scale up significantly. However, for certain activities and particularly in rural areas of West Devon with limited public transport provision, cars and vans are the most suitable means of transport. Replacing petrol and diesel vehicles with electric vehicles, alongside facilitating a modal shift in the better populated areas is a key part of our decarbonisation goals.

This is supported nationally through the Department for Transport's (DfT) Decarbonising Transport document July 2021, which sees increasing cycling, zero emission vehicles and accelerating maritime decarbonisation as key issues¹. Furthermore, the Office for Zero Emission Vehicle's (OZEV) Taking the Charge EV strategy launched in March 2022, which outline the government's plans for meeting targets to decarbonise transport and reduce reliance on fossil fuels. The Local Authority Toolkit, launched in April 2022, also offers additional evidence to support this, and highlights the

¹ Department for Transport. 2020. Transport Decarbonisation Plan. www.gov.uk/government/publications/transport-decarbonisation-plan

synergies with other low carbon transport modes.

The UK Government has revised its targets to phase out petrol and diesel cars, they will require 80% of new cars and 70% of new vans sold in Great Britain to be zero emission by 2030, increasing to 100% by 2035.

According to the Department for Transport, the current transport system places wider costs on society:

- **Air pollution Costs** to health and social care could reach £5.3 billion by 2035.
- The Stern review estimated the **overall costs of unmitigated climate change** to be equivalent to 5–20% of global GDP each year £10bn.
- It's estimated that the **annual social cost of urban road noise** in England is £7 to 10 billion.
- **Health and obesity** – The UK-wide NHS costs attributable to overweight and obesity are projected to reach £9.7 billion by 2050.
- **Overall the current cost of the transport system** to society is £49.9bn with wider costs to society estimated to reach £49.9 billion per year.

The Government see a clear role for local authorities for the roll out of EV chargers in particular through its EV strategy 'Taking charge: the electric vehicle infrastructure strategy'² stating that local authorities are fundamental to successful chargepoint rollout, particularly for the deployment of widespread on-street charging. We are therefore ideally placed to identify the local charging needs of residents, fleets and visitors.

In order to demonstrate our commitment to the uptake and deployment of electric vehicles, this document sets out our vision and planned approach to EV and travel support. A two-year time horizon has been set for this EV strategy, covering 2023–25. This short time horizon allows the strategy to focus on what is currently known, the current funding streams on offer, what can be practically delivered, and for the EV market in the UK to mature. The strategy will be reviewed regularly to provide opportunity to reflect upon rapid technological and socio-economic change, with a refresh published in 2025.

² HM Government, 2022. Taking charge: the electric vehicle infrastructure strategy. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1065576/taking-charge-the-electric-vehicle-infrastructure-strategy.pdf

Scope of this Strategy

The scope of this Strategy is limited to vehicle charging with an element of transport decarbonisation through alternative electrically powered modes such as bikes.

We agree with the Committee for Climate Change that zero emission cars and lorries cannot on their own meet all our climate goals or solve all our problems. However, we do need to influence this transition as an electrified transport fleet is a piece of puzzle, alongside reducing the need for trips to reduce congestion and provide safe alternatives to improve air quality, reduce noise and increase health and wellbeing. In essence, a rural solution to transport decarbonisation will involve combining public transport with more tailored on-demand and shared mobility services, including peer-to-peer and volunteer-based solutions.

With all that in mind, this electric vehicle strategy covers the following areas:

- Destination charging
- Residential and community charging
- EV and charge sharing
- E-bikes
- Council fleet transition
- Charging at council sites



The following is not included within the scope of this strategy:

- **Motorbikes** – There is currently low demand for e-motorbikes. Almost all e-motorcycles currently use 3-pin chargers and therefore no dedicated charging infrastructure is required.
- **Rail transport** – Rail infrastructure is the responsibility of Network Rail. The Council has limited powers to influence the rail sector and its adoption of zero emission rail technology.
- **Heavy goods vehicles** – The adoption of zero emission vehicle technology will occur later than the period covered by this strategy. It is unclear at this time if electric or hydrogen will emerge as the primary energy source for powering freight vehicles.
- **Hydrogen power solutions** – The Climate Change Committee concludes that while battery electric vehicles are now well placed to deliver the bulk of decarbonisation for cars and vans, hydrogen fuel cell vehicles could play an important role for heavy-duty transportation (e.g. buses, trains, lorries and marine) where the need to store and carry large amounts of energy is greater. For personal transportation, hydrogen solutions are no better, or in some cases worse than current fossil fuel technology.
- **Active Travel** – While this strategy will cover e-bikes, it is not a supplement to a full active travel strategy which will emerge as part of our Placemaking commitments through the Local Cycling and Walking Infrastructure Plan we are developing.

Local Picture

The main challenges involved with rural transport are symptoms of a car-oriented road infrastructure and geographically sparse population which makes it unsafe to walk and cycle. Coupled with insufficient provision of public transport and a lack of critical mass for shared mobility and market-driven solutions³, the challenges around decarbonising rural transport are vast and well documented.

In relation to the transition to electric vehicles, West Devon faces very specific challenges and there is a risk that more rural locations are left behind. For instance, many private charging businesses require high turnover of users, which is why cities and service areas off motorways have seen the largest increase in charging availability. Furthermore, many of the more remote areas in the Borough has issues around grid capacity, with some new EV connections requiring substation upgrades which can run into the tens of thousands of pounds. Equally, there is greater dependence on car travel, with longer trip distances than urban areas, providing a significant opportunity to reduce carbon emissions.

The number of EVs in West Devon is growing each year, with nearly eight times as many EVs registered compared to just four years ago. There are high levels of interest in EVs in the Borough, combined with high levels of potential tourist demand for EV charging infrastructure. A range of EV charging infrastructure projects are already underway to support and enable this growth.

³ UTIP, 2022. The rural mobility challenge for public transport: How combined mobility can help https://cms.uitp.org/wp/wp-content/uploads/2022/02/Knowledge-Brief-Rural-Mobility_FEB2022-web.pdf

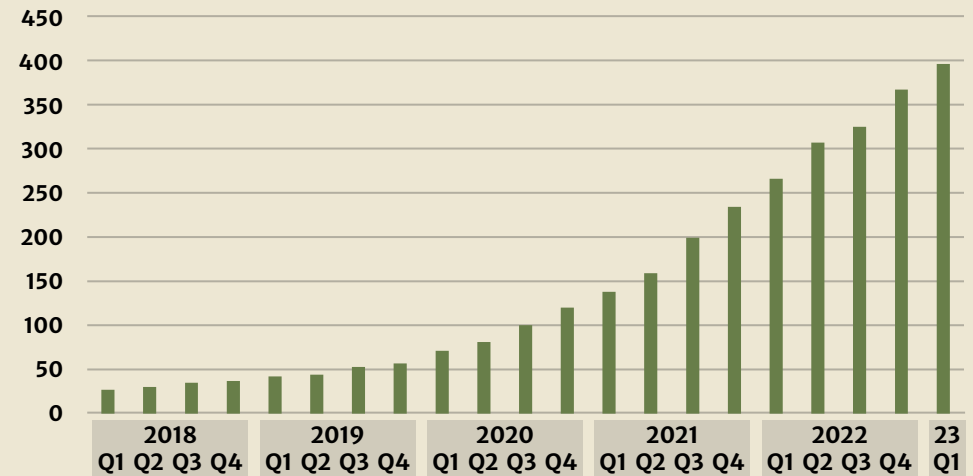


Figure 1: BEV's registered within West Devon between 2018 and 2023 (DVLA, 2023)



Figure 2: Distance Travelled to work in West Devon, working age population (Census, 2011)

The majority of emissions are generated by the most affluent citizens, both globally and at a local level. Across the UK, the highest income group has more than three times the household emissions of the lowest income group. **Figure 3** shows UK household emissions from different sources by income decile. It shows that the most affluent in society have by far the largest share of transport emissions, primarily because of increased travel distances both by car and aviation.

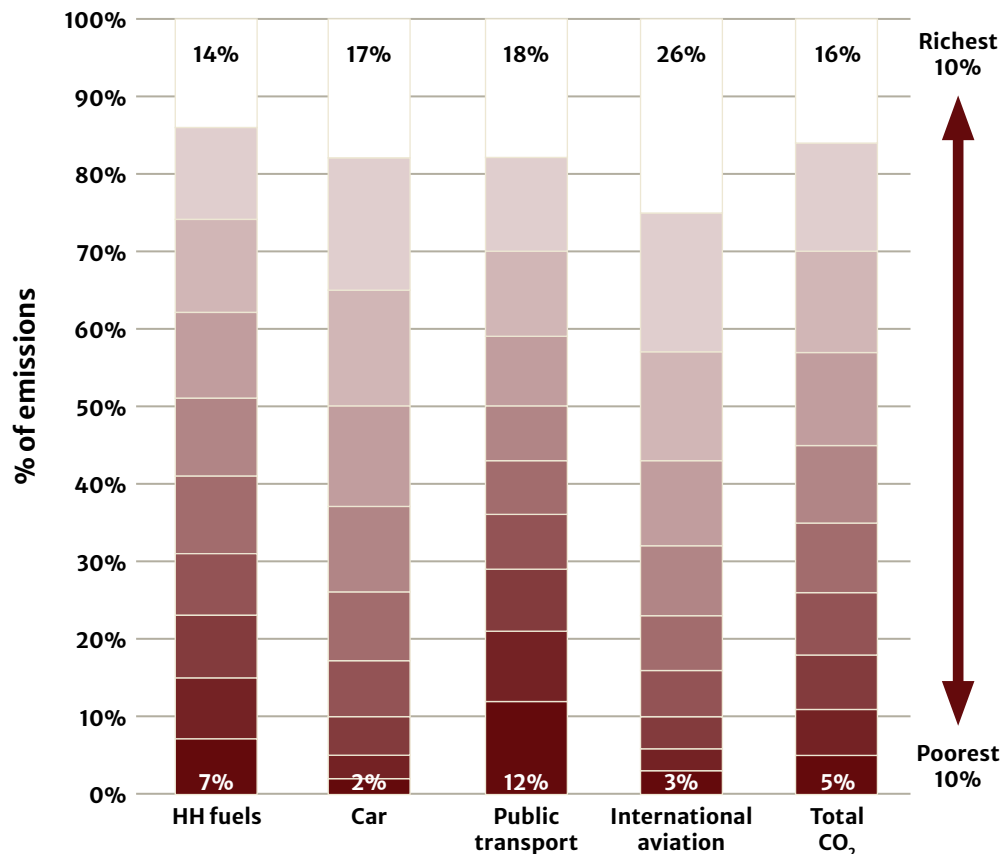


Figure 3: Percentage of UK household emissions from different travel sources by income decile – Source: CSE (2013)⁴

⁴ www.cse.org.uk/downloads/file/distribution_of_uk_carbon_emissions_implications_for_domestic_energy_policy.pdf

In order to effectively tackle transport emissions through electrification, the solutions need to be equitable, fair and seek to provide different options for different people according to their needs and circumstances. Part of this will be ensure the charging infrastructure is available for those either living in remote areas or unable to install charging points at their own home but also to facilitate the availability of different options such as e-bikes and car sharing.

Just by influencing domestic passenger transport and helping to facilitate a modal shift in transport, West Devon transport emissions have the potential to fall from near 200,000 tCO₂e down to 66,000 tCO₂e by 2050⁵ as demonstrated by **figure 4**.

To achieve this level of reduction, we would need to see 100% electric vehicles by 2050, a 25% reduction in trips per person per year by 2030 and the average modal use of cars, vans and motorbikes reduced from 74% to 38% by 2050.

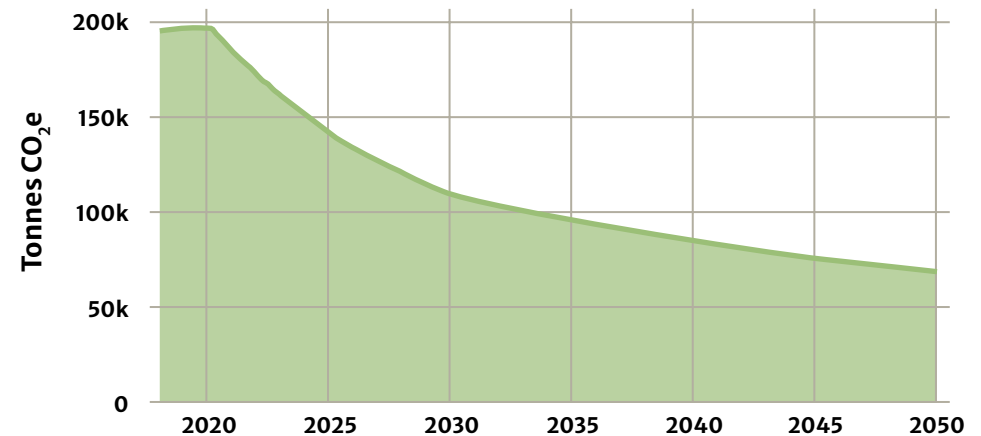


Figure 4: West Devon Transport emissions projections by influencing private transport (Anthesis Group, 2022)

⁵ Anthesis, SCATTER Tool, 2022. <https://scattercities.com>

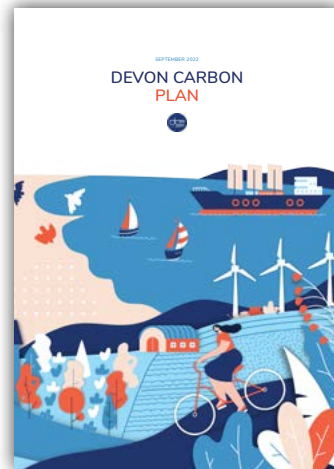
Local Policy Context

This section presents a policy review, summarising relevant local policy. The West Devon Borough Council EV strategy should align with local policies and priorities.

Devon Carbon Plan

The Devon Carbon Plan describes Devon's net-zero vision, specific actions within the Devon Carbon are related to EV. It notes:

- T32.** Develop EV Charging Strategies to deploy the right chargers in the right place.
- T33.** Devon Climate Emergey (DCE) partners to use their assets to provide publicly-accessible EV charging and shared mobility infrastructure.
- T34.** DCE partners and organisations in the County to transition their fleets to Ultra Low Emission Vehicles.
- T35.** Accelerate the switch to Ultra Low Emission Vehicle taxis by placing requirements and incentives within the licensing process.



Devon County Council EV Strategy

- The Devon County Council EV Strategy was out for public consultation in December 2022. The recommended actions involve co-ordination between authorities and DCC to increase the availability of charging in more challenging areas and to collaborate on funding bids through schemes such as LEVI (Local Electric Vehicle Infrastructure Fund). Some of the relevant actions read:
- 2c. Deliver off-street residential hubs** - DCC will identify where there are overlaps between areas of need and council or district owned assets to see if publicly-accessible charging could be installed.



3. **Plug gaps in private-sector destination and intermediate charging provisions** - DCC will actively identify sites where destination and/or en-route charging could be installed to meet market need. DCC will then work with landowner, community, public sector and private sector stakeholders to facilitate installation of rapid charging hubs.
7. **Leverage scale through Devon-wide funding applications and procurement** - DCC will seek to collaborate with local districts, boroughs and other strategic partners when applying for grant funding, procuring services, and delivering the strategy. Specific emphasis on packaging up more and less commercially viable sites together.
8. **Lead on local borough co-ordination** - clear benefits of ensuring local councils are co-ordinated, including strengthened funding bids. DCC will coordinate with district councils to ensure Local Plans and EV policies are consistent.

A Plan for West Devon

The West Devon corporate strategy, 'A Plan for West Devon' also contains actions related to EV's, specifically:

- NE1.1.** Phased conversion of our environmental management fleet to a greener fleet.
- NE1.2.** Increasing availability of electric charging points across the Borough (which includes adopting an EV Strategy).

Producing this EV strategy is delivery milestone for our corporate strategy.



What have we done so far?

- ◆ Developed local planning policy requiring EV chargers for new major development (Plymouth & South West Devon Climate Emergency Planning Policy Guidance).
- ◆ 4 chargers installed so far through DELLETI and ORCS.
- ◆ Introduced a salary sacrifice scheme for staff to lease EVs, currently 18 members of staff have taken up the offer.
- ◆ Undertook a survey with the Energy Saving Trust to help understand our fleet requirements.



Our Vision

Help to increase the number of charge points in the authority area by 50% (currently 28 publically accessible), provide infrastructure to support uptake of 3138 EVs by 2025 and reduce organisational light transport emissions by 50% by 2025.



How will we achieve this?



Aim 1

Work with partners such as Devon County Council, chargepoint operators, OLEV to provide high quality, and well distributed chargepoint provision

- Focus on chargepoints in less viable and remote locations to help grow demand in those areas.
- Enable residents and communities without off-street parking to access public chargepoints.
- Ensure chargepoints and designated parking spaces are accessible and maintained.
- Begin to roll out EV chargers installed by WDBC which will be owned and operated by the Council.



Aim 2

Increase visibility of EV uptake and lead by example

- Conversion of Council light fleet vehicles (Vans, cars and grounds maintenance equipment).
- Support the implementation and promotion of alternative and more affordable transport modes including EV car clubs and electric micro mobility options such as e-bikes.

Why do we want to achieve this?

- ◆ Achieve air quality improvements.
- ◆ Carbon emission reductions to support the councils climate emergency declaration aims.
- ◆ Resident and business engagement:
 - a. To understand likely demand for EV charging and their locations;
 - b. To gain support for infrastructure delivery;
 - c. Increase the uptake of fossil fuel transport alternatives through knowledge share (for example try before you buy schemes) and providing alternative options to car ownership.



Aims and Actions



Aim 1: Increase EV Chargepoints across the Borough

Availability of public charging points is an important issue, as range anxiety is the single most quoted reason why individuals will not yet buy an electric vehicle. Different speeds of charge points are available and chargers are divided into types, based on capacity:

- 'Slow' chargers are 3 kW (AC);
- 'Fast' chargers are 7kW to 22 kW (AC);
- 'Rapid' chargers are 50 kW but DC in nature;
- 'Ultra rapid' chargers are 150 – 350 kW and again DC in nature.

At home, many people will either make use of a 3pin plug (3 kW) or have a chargepoint installed outside, usually at a rate of 7kW. Fast chargers (7kW to 22kw) are often installed in car parks, council owned ones and business car parks with some even installing rapid chargers. The type of charger installed is also dependent on grid capacity, many of the more remote areas of the district are grid constrained, meaning there is little capacity to install banks of fast and rapid chargers without an upgrade to a nearby substation.

To make the best use of resource, the Council will seek to unlock opportunities to provide charging points for those who are not catered for elsewhere or lack sufficient off street home charging. This would mean ignoring the motorway / trunk road network and workplaces. We will also focus on the Council's own needs (for our own vehicles), which will need adequate charging availability around the most remote areas of the Borough. Innovative solutions are emerging for those areas with little off street parking. For instance, retractable charge stations are now available to reduce street clutter and provide places to charge vehicles on street.

We will also be using our own capability to install public EV chargers which will be owned and operated by WDBC, this will enable us to have more control over local pricing, structure and access.



Emerging and continually evolving technology, are why this strategy has a two-year time horizon, covering 2023–25. We will ensure we keep our attention directed towards emerging technology and solutions to EV charging to provide the best possible strategic direction for EV charging over the next few years.

The Council only has so much land available and often has to balance the need to secure parking

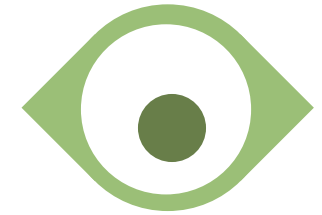
income while providing charging infrastructure to visitors. To maximise opportunity, West Devon communities and parish councils play a key role in identifying local EV charging needs and could help expand the community charging network by installing chargepoints on community spaces such as village halls and parking areas. We already have a baseline of sites following a short survey carried out in December 2021, which ran until February 2022.

The purpose of this survey was to find out which Town and Parish Councils were interested in hosting chargepoints and whether they had any suitable land or buildings.

To achieve a suitable number of chargepoints, it's crucial that we engage with neighbouring local authorities, Town and Parish Councils, landowners, local chargepoint stakeholders, and commercial network operators.

Action Plan

Action Ref	Action	Resources	Partners	By when
EV.1	Support a bid to the LEVI Scheme with Devon County Council and also explore sites where WDBC can own and operate EV chargers on its assets.	Internal Resource	OLEV, DCC	Call for sites to take place in 2023
EV.2	Promote and support community charge sharing scheme such as Zap-Home and CoCharge.	Internal Resource	Zap-home, CoCharge, Town and Parish Councils	2023–2025
EV.3	For existing workplaces, promote the OLEV Workplace Charging Scheme.	Internal Resource	LEP, DCE,	2023–2025
EV.4	Aim to install 2 more chargepoints at council owned public car parks (through DELETTI and ORCS) and then work on feasibility for in house installation opportunities.	Internal Resource and budget through existing grants in place	DCC, OLEV, Western Power	December 2024
EV.5	Encourage stakeholders to deliver EV chargepoints at other key destinations including supermarkets and rail stations.	Internal Resource		2025



Aim 2: Increase the visibility of EV uptake and lead by example

The Council currently operates a fleet of 11 vehicles which are primarily used by mobile locality officers and grounds maintenance personal. Use of these vehicles account for 32 tCO₂e of the Council's overall operational carbon emissions. Our vehicles include cars and vans, the waste fleet is managed by FCC. This fleet transition will be dependent on the availability of public chargers for fleet staff, however we will explore alternative options for fleet chargers through solutions such as [Paua](#) and [CoCharge](#).

Alongside the availability of public charging points many people simply are unaware of how EVs operate or cannot afford to finance the cost of vehicle when the used combustion engine vehicle market remains buoyant and affordable, which will only increase as more people begin to sell petrol and diesel cars to buy EV's. Even as the EV market increases and costs decrease, these vehicles will still be costly for those on lower incomes. It's here where an available and affordable EV sharing scheme can help, to increase mobility, bring costs down and clean up our transport emissions across the Borough.

Action Plan

Action Ref	Action	Resources	Partners	By when
EV.7	Complete Fleet Review to identify internal combustion engine to battery electric vehicle replacement schedule and costs. Analysis of existing vehicle routing and usage using teletrac software already underway.	Internal Resource initially, cost identification an outcome	Energy Saving Trust	March 2024
EV.8	Aim to install chargepoints at Kilworthy, Okehampton and Tavy Business Centre for operational and fleet use	Internal resource seconded for feasibility and electrical, installation and management and maintainence	National Grid	2025
EV.9	Explore additional local incentives to increase EV uptake beyond additional chargepoint infrastructure, such as car sharing clubs (explore car share as part of pool car provision)	Internal Resource	Devon County Council	2022-2024
EV.10	Roll out e-bike trials subject to details through Shared Prosperity Fund and Rural England Prosperity Fund	Funding earmarked through Shared Prosperity Fund and Rural England Prosperity Fund	Devon County Council, GWR	2023 - 2024

Delivery

Historically, the Council has jointly procured EV charging with partner authorities such as Devon County Council. Alongside this, the Council will seek opportunities to deliver its own charging infrastructure, it's important to highlight the different delivery models.

Delivery Model	Advantages	Disadvantages
<p>West Devon network ownership</p> <p>This 'own and operate' model is an approach in which a local authority appoints a supplier to install and manage chargepoints on council-owned land for the contract period and fully funds the installations, typically using grant funding and local authority capital.</p>	<ul style="list-style-type: none"> Retains full ownership of the charging infrastructure Retains full ownership of revenue Able to select sites regardless of viability Full flexibility of back office function such as tariffs and rates 	<ul style="list-style-type: none"> Cover costs of ongoing operation, maintenance and upgrade Risk of equipment becoming outdated and left with obsolete charging Reputational risk associated with unreliability
<p>Public / private concessionary model</p> <p>This is a model where the charging is part funded by the public sector but a private sector operators runs and maintains the charge points i.e. DELETTI.</p>	<ul style="list-style-type: none"> Potential for income share or land leasing revenue Reduced reputational risk associated with unreliability Local authority has no responsibility or costs associated with maintenance and repair Potential for charging type upgrades in the future as part of an agreement no control over delivery timescales 	<ul style="list-style-type: none"> Reduced income vs full ownership Not all chargepoint operators are amenable to the terms, reducing the choice of suppliers Lengthy tender exercise Private operator will likely require large number of sites to make installation viable Burden of contractual disputes
<p>Private Operator</p> <p>Full ownership and responsibility from a private operator.</p>	<ul style="list-style-type: none"> Lowest risk across all issues highlighted above If on public sector land, potential for long term rental income 	<ul style="list-style-type: none"> Many of our rural sites will likely be not viable for a private operator Least control, difficult to achieve ambition and vision for far reaching and equitable charging infrastructure



Based on the advantages and disadvantages of the different models, and from existing experience, the concessionary model, with a private sector delivery partner provides a good balance of risk and control. However there is a need to ensure that the network operator fulfils their service level obligations to maintain a reliable network and provide a customer focussed support function as set out in any framework.

Following learning from our existing partnership schemes, we have also developed skills internally and will therefore consider all options for EV charging delivery across the Borough.

How success will be monitored and any lessons learned implemented

Over the course of the strategies life, we will measure the following;

- Monitor charge point use and other market trends to inform future provision of fast and rapid charge points.
- Monitor EV take up.
- No of charge points delivered each year.

Glossary

Term	Explanation
Battery electric vehicle (BEV)	A vehicle powered by a battery, which can be plugged into an electricity source to recharge. Also known as 'pure' or '100 per cent' EVs, they have zero tailpipe emissions.
Chargepoint	A charging socket which is connected to an electric vehicle via a charging cable to allow the battery to be recharged with electricity.
Chargepoint Network	The way that users access a chargepoint via RFID card or web or app.
DELETTI	Devon Low carbon Energy and Transport Technology Innovator.
eBike	An electrically assisted pedal cycle. The maximum power output of 250 watts should not be able to propel the bike when it is travelling more than 15.5mph. In the UK you must be over 14 years old to ride an e bike.
eCargo bike	An electrically assisted pedal cycle featuring a minimum 125 litre cargo volume capacity and minimum 130 kg weight capacity.
EV	Electric Vehicle; the vehicle is powered by electricity so requires plugging in to recharge the battery.
ICE	Internal combustion Engine.
kWh	Kilowatt Hour; unit of electricity. Car batteries are sized in kWh i.e. a 50 kWh battery stores 50 kWh of electricity.

Term	Explanation
LEVI	Local Electric Vehicle Infrastructure.
p/kWh	Pence per Kilowatt Hour. Users are charged for each kWh they consume. Charging tariffs are in pence per kilowatt Hour.
Payment by bank card	In line with national regulations, all new Rapid and Ultra Rapid chargers will accept payment via a contactless bank card (credit or debit card). This allows users to access these chargers without joining a Network.
PHEV	Plugin Hybrid Electric vehicle; combines a smaller battery with a conventional internal combustion engine and an electric motor. This allows an electric range of between 20 – 50 miles and the ability to drive with an empty battery for hundreds of miles using petrol or diesel.
Pool car	A vehicle that is made available to staff to book for business travel.
ORCS	On-street Residential Chargepoint Scheme.
Overstay fee	To encourage appropriate use of charging bays and assure they are available for people who need them an overstay fee will apply after a vehicle has finished charging and grace period has been exceeded.
OZEV	Office for Zero Emission Vehicles.
WSP	Williams Sale Partnership, lead consultants for the Devon County Council EV Strategy



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