

Electric Vehicle Charging Strategy



DRAFT

Date of publication



Background



The market for electric vehicles and charging infrastructure

- With the sales of new petrol and diesel cars set to end in the UK from 2035, the uptake of electric vehicles (EV) is forecast to rapidly increase over the next decade.
- As of the end of 2023, there are now approximately 1,000,000 fully electric cars on UK roads and a further 600,000 plug-in hybrids. This compares with just over 10 years ago when there were around 5,000 electric vehicles registered.
- At present, most of the UK's charging demand is met through home charging (on private driveways / garages or allocated off street spaces), however, publicly accessible charging infrastructure is now becoming increasingly necessary to enable wider EV uptake.

Our target to achieve net zero carbon

- The County Council declared a climate emergency in May 2019. The declaration commits the authority to meet net zero targets by 2035 for its own operations and to reach the target of achieving net zero across the county by 2050, to align with government targets.
- To help decarbonise transport and contribute to our net zero ambitions for the county, we are on keen to support residents in switching to electric vehicles. Although only part of the solution, EVs have a key role to play, alongside our work to encourage sustainable transport options, such as walking, cycling and bus travel.
- Nevertheless, this is a new and very challenging area for local authorities, with very little consensus nationally on how to provide the necessary charging infrastructure in a coordinated way, to deal with growing EV demand, particularly for those with limited or no access to off-street parking.

Introduction

The Electric Vehicle Charging Strategy

- The County Council's Electric Vehicle Charging Strategy is an important first step in helping the authority play its part in the roll out of EV charging infrastructure.
- Although we anticipate that most of Leicestershire's public charging infrastructure will be delivered by the private sector, we have a key role to play in securing Government funding and helping to fill in gaps in provision and support those with limited access to off-street parking.
- The EV market is rapidly evolving, and we are at the early stages of planning for EV charging. Our Strategy is focused on what we can do in the short term, up to around 2030, to specifically address charging infrastructure for EV cars and vans, but we will have one eye on the longerterm future to fit with wider national policy changes and respond to technology and innovation.

- Our Strategy will firstly support the delivery of the authority's new emerging Local Transport Plan and our vision for transport in Leicestershire.
- Secondly, it will provide the framework for our approach to EV charging provision and its practical ongoing delivery, setting out the Council's key long-term goals.
- Finally, it will outline our immediate objectives, what we will seek to achieve, in the next 5 to 6 years. How we will work in collaboration with residents, partners, communities and the private sector to help establish a robust and accessible public charging network that meets the needs of EV drivers across the county and encourages the widespread adoption of EVs.
- It is likely that the Strategy will need to be reviewed and refreshed after the first two years, to ensure we respond and adapt, as technology advances and new national policies and funding streams are brought forward.

Local Transport Plan (LTP)

Our wider vision for Transport across Leicestershire

Electric Vehicle Charging Strategy (EVCS)

- Pathway to public EV chargepoint delivery and its practical ongoing delivery
- Key goals and objectives to underpin the authority's approach
 - Wider policy framework and context

Day to day chargepoint delivery, operation and management

Our Key Goals

- We have developed five key goals for our Strategy, based on our LTP overarching vision for Transport in Leicestershire.
- Our key goals outline our aspirations for our Strategy; and the broad outcomes we would like to achieve in the long-term beyond 2030.
- We have also identified a series of Strategy
 Objectives, which describe the steps we intend to take in the short term (up to 2030), to work towards our long-term goals. These are set out on pages 10 15.



1. Social Equity

To deliver an equitable electric vehicle charging network that supports economic prosperity and meets local ambitions, through an accessible, inclusively designed and well distributed network for all communities.



2. Healthy Environment

To deliver a healthy environment for all by helping decarbonise the transport system, reducing vehicle exhaust emissions from transport and improving air quality.

Our overarching Vision for Transport in Leicestershire

'Delivering a safe and connected transport network which is resilient and well-maintained to support the ambitions and health of our communities, deliver economic prosperity whilst safeguarding our environment'



3. Creating Better Places

To create better places using infrastructure that is inclusive, sensitively placed, designed to complement our public spaces and deliver improved facilities for communities.



5. Resilient and Safe Network

To guide and promote a resilient and safe transport network with infrastructure that is reliable, accessible, safe, compatible, easy to use and represents good value for money at installation and use during its life.



4. Connected Network Meeting Demand

To support economic activity and keep people and places connected, especially in a rural county such as Leicestershire, by providing the right charging solution in the right place and encouraging the uptake of electric vehicles.

Scope

Overall

The Strategy covers the administrative area of Leicestershire.

It primarily covers EV charging infrastructure delivered and managed by the County Council.

User Groups

The Strategy is aimed at the provision and delivery of charging infrastructure for:

- Residents
- Local businesses and their employees.
- Van-based logistics operators
- Visitors
- Shoppers

Vehicles

The Strategy will cover charging infrastructure for cars and vans.

Chargepoint types

The Strategy will focus on the delivery of:

- Mainly lower powered, On-street, 'Standard' (7kW) chargers suited for overnight charging.
- Lamppost chargers (3kW) and a small number of 'Rapid' (50kW+) chargers considered across the county, where appropriate

Chargepoint deployment

The Strategy will focus on charging infrastructure deployed equability across the county, driven by demand, land availability, commercial considerations of our CPO partners, grid capacity and the availability of funding.

In doing we will focus on infrastructure that is:

- Located within the public highway, i.e. residential streets, estates, high streets, and main roads.
 Suitable Council owned sites will also be considered, i.e. country parks and libraries, subject to the availability of funding.
- Publicly available, 24 hours a day, serving wider public interest).
- Located in areas where there is evidence of residential parking demand, where home charging is not possible (i.e. off-street parking is limited or unavailable).
- Spread across the entire county, in both urban and rural locations, acknowledging that more chargepoints will be needed in urban, more populated areas.
- Located at sites identified by residents, where this aligns with the scope of the Strategy.
- Planned and delivered in accordance with Government EV funding criteria to maximise the Council's chances of success i.e. LEVI funding.

Out of Scope

The Strategy does not, at this point, cover EV charging infrastructure for:

- E-bikes, electric motorbikes, buses or large goods and service vehicles.
- Off-street car parks, except for suitable Council owned sites, subject to funding.
- Sites located off the public highway.
- Private business, i.e. destination, workplace and depot charging (including the Council's fleet operations).
- Private individuals or sole use.
- En-route charging, i.e. sites within laybys.
- Cross pavement solutions i.e. gully channels solutions. The Council are awaiting appropriate and technical guidance from Government to navigate the significant and complex issues resulting from this type of intervention.

The term 'electric vehicle' is used to refer to all 'plugin' vehicles excluding hybrid vehicles without a plug.

Roles and Responsibilities - Delivering public EV charging infrastructure:

• National Strategic Direction: Set the overall vision and driving the agenda through strategies and policies. Infrastructure Funding: Government funding, including via contributions from operators, remains vital to support delivery of charging infrastructure Governance Government • Regulation: Continue to regulate the market to protect consumers, improve user experience and boost consumer confidence and Oversight Support, Advice & Guidance: Continue to support Local Authorities though the provision of advice and guidance Local Strategic Direction: Understanding local current and future public charging needs and identifying gaps in public EV charging provision. Publishing long-term strategies setting out the approach to delivery. **Upper Tier Local** • Delivery: Adapt public assets, such as public highway to deploy chargepoints in accordance with local strategies. **Authorities** • Funding: Secure funding from both Government and the private sector to support the delivery of chargepoints i.e. Leicestershire • Planning and coordination: Working with public/ private sector chargepoint providers to plan and coordinate delivery, to ensure a coordinated and coherent approach. **County Council** • Facilitation: Work with developers and Local Planning Authorities (LPAs) to facilitate EV charging infrastructure in new development. • Raising Awareness: Informing local communities about EV's and associated charging infrastructure Delivery: Identify local EV charging needs and help expand the public charging network by installing chargepoints on district owned car parks and district owned assets **District Councils** Infrastructure • Facilitation: Place appropriate chargepoint requirements on new developments and ensure developers meet requirements set out in building regulations. **Provider Developers** Delivery: Provision of chargepoints in new development, in accordance with Building Regs, and in liaison with LPAs, to support the broader network of chargepoints. **Local Business** Delivery: Provision of destination chargepoints at gyms, leisure centres, supermarkets, shopping centres etc, to support the broader network of public chargepoints. **Fleet Operators** Delivery: Develop chargepoint plans and share these with Upper Tier Local Authorities to understand wider charging provision requirements. **National Highways** Delivery: Work closely with CPOs to plan and deliver the rollout of charging infrastructure alongside the Motorway and Trunk Road network, including services. • Install, Operate & Maintain: Bid into tenders and install, manage, maintain, and operate chargepoints that meet all legal and regulatory requirements. **Charge Point** • Funding: Provision of financing options in return for agreed chargepoint income.

Infrastructure Supplier

Supporting Infrastructure

Provider

Distribution **Network Operator** (DNO)

Operator (CPO)

- Facilitate: Manage new connection requests for EV chargepoints. Facilitate fast and efficient connections of EV charging infrastructure to the grid
- Support: Work with public sector to understand future electricity capacity needs and invest in the network to reinforce where necessary. Support local authorities and CPOs in planning chargepoint delivery. Make data available through open data portals and heat maps regarding grid capacity.

• Support, advice & guidance: Collaborate with local authorities and provide the technical expertise to support the roll out of infrastructure and development of solutions.

Policy Context: National and Regional

Midlands Connect: Supercharging the Midlands (2021)

States that EVs have an increasingly important role to play in rural areas, where a larger proportion of emissions (77%) come from longer trip distances over ten miles. These journeys are less likely to be easily transferred to active travel methods such as cycling and walking, and so a higher degree of motorised travel is likely to remain.

Transport Decarbonisation Plan – Decarbonising Transport: A Better Greener Britain (2021)

- Outlines a clear path to carbon neutrality by 2050.
- Describes removing tailpipe emissions from cars and vans as fundamental to decarbonising transport as they were responsible for almost a fifth (19%) of the UKs total domestic greenhouse gas emissions in 2019.

Taking Charge: The Electric Vehicle Infrastructure Strategy (2022)

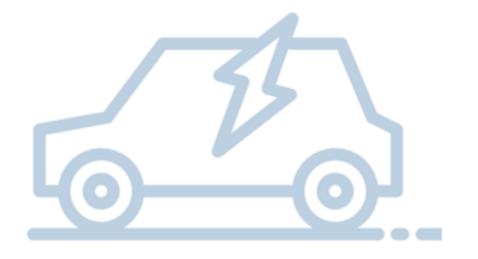
- Plans for around 300,000 public chargers to be required nationally as a minimum by 2030. This may increase depending on EV uptake and future driving habits.
- Sets out Local Authority's responsibilities, to develop local EV chargepoint strategies as an immediate priority.
- Vision for 2030:
 - Everyone can find and access reliable public chargepoints wherever they live
 - Effortless on and off-street charging for private and commercial drivers
 - Fairly priced and inclusively designed public charging
 - Market-led rollout for the majority of chargepoints
 - Infrastructure seamlessly integrated into a smart energy system
 - Continued innovation to meet drivers' needs.

Plan For Drivers (2023)

 Announces over £380million of funding from March 2023 for local authorities across England through the Local Electric Vehicle Infrastructure (LEVI) grant.

Zero Emission Vehicle (ZEV) Mandate (2023)

 This requires 80% of new cars and 70% of new vans sold in Great Britain to be zero 2 emission by 2030, increasing to 100% by 2035.



Policy Context: Local

Environment Strategy: Delivering A Better Future 2018-2030

 Aims to reduce the environmental impacts of travel and transport through reducing greenhouse gas and other pollutant emissions from the local transport network

Leicestershire Net Zero Strategy & Action Plan 2023-2045

 Outlines the County Council's approach to achieving net zero for its own operations and across the county.

Medium Term Financial Strategy (MTFS) 2024/25 to 2027/28

 In light of the Council's financial position, the Council's net zero targets were revised; for its own operations, from 2030 to 2035, and for the wider County, from 2045 to 2050.

Strategic Plan 2022-2026

- The Council's long-term vision and priorities for the next 4 years.
- Highlights Leicestershire's below average rates of EV ownership.
- States that the Council will work with partners to enable and encourage EV usage, such as by expanding chargepoint infrastructure with success measured by the rate of electric vehicle ownership.

Local Transport Plan 4

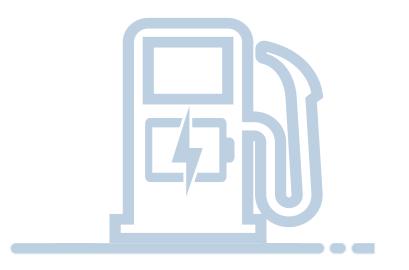
- EV Strategy underpins the LTP4 and deliver on the Core Themes identified for Leicestershire's Strategic Transport Vision:
 - Enabling Health & Wellbeing
 - Protecting our Environment
 - Delivering Economic Growth
 - Enhancing our Transport Network's Resilience
 - Embracing Innovation

Leicestershire Health and Wellbeing Strategy 2022-2032

 Identifies air quality and its impact on health and health inequalities across Leicestershire as a priority for success.

Leicestershire Highways Design Guide

 Outlines the latest Building Regulations and the requirement for developers to fully engage with the planning process to support charging needs and to liaise, closely with the local planning authorities regarding EVCP provision in new developments.



Leicestershire - the current situation

As of December 2023, across Leicestershire there are:



13,100

Registered private and company plug in EV's



470

Publicly accessible chargepoint (Includes 137 'Rapid')



1/4

Households with limited or no access to off-street parking



0

Number of on-street chargepoints

Public Consultation

Summary of the main findings from our EV countywide survey

Start Date

16th Oct 2023

End Date

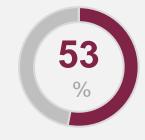
30th Nov 2023

540
Online survey responses

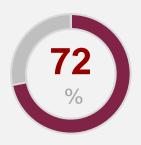
548
Identified potential EV chargepoints

Main barriers to owning an EV:

- Vehicle costs
- Lack of local chargepoints
- Using chargepoints



53% of respondents currently own an EV



72% of respondents suggested chargepoints in urban settlements



81% of those respondents who own an EV, have a home chargepoint



55% of respondents suggested chargepoints at destinations, such as supermarkets, leisure and shopping centres



60% of current EV owners who do not have home charging would like on-street chargepoints



27% of respondents suggested chargepoints in on-street locations

Leicestershire - what the future might look like

2030 **128,300**

2040

415,800

Projected number of plug in EV's



> 1 in 4

Registered vehicles that could be electric in 2030



2030

3,200

2040

11,400

Minimum number of public chargepoints required to meet forecast EV uptake



29%

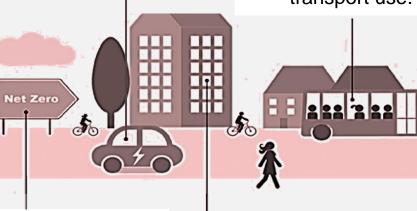
Car and van CO₂ emissions that could be saved by 2040 through switching to EV's

Challenges

EV's do not address network congestion. Still remains an issue around single occupancy vehicle numbers and managing demand on the network.

Supporting the transition to alternative fuels amidst the need to reduce overall travel, reduce car use and encouraging active travel and public transport use.

Other technologies may be needed as a balanced approach to achieve net zero, including alternative fuels, increased energy efficiency and carbon offsetting.



EV's are not completely carbon neutral, when energy supply and manufacturing are considered.

EV growth will have a significant impact on electricity demand. If not managed carefully the additional demand will create challenges across all sections of the energy system, particularly at peak times.

The cost of public rapid and ultra-rapid chargers remains relatively high compared to the cost of filling up an equivalent petrol vehicle.

72

To continue to develop an evidence base of Leicestershire's current and future EV charging needs.

To underpin our Strategy, it is vital that we continue to collect, maintain, and develop a robust evidence base of EV data and intelligence from a wide range of sources. This will allow the Council to make informed decisions and deliver the most appropriate charging solutions in the right location to meet current and future demand.



Community Engagement and Feedback

- Maintain an open dialogue with our communities and seek feedback through the Council's EV website.
- Community engagement will help the authority to understand the evolving needs and expectations of our residents, ensuring that our infrastructure focuses on the user and effectively addresses their requirements.



Leicestershire EV Planning Tool

 Continue to develop a bespoke Leicestershire EV map-based planning tool, to help collect and maintain all available EV related spatial data. The tool will allow the authority to identify any gaps in public chargepoint provision and any highlight any network constraints, supporting future site selection decisions.



National EV Support Tools

 Utilise all available data and insight from national support organisations and platforms (e.g. Cenex, Energy Savings Trust (EST) and Zap Map), to track current uptake and understand future demand.



Business and Fleet Engagement and Feedback

 We will seek to engage with local businesses, large fleet operators, and the taxi industry to understand EV charging requirements and constraints (for business and employees), and any opportunities to aid the expansion of chargepoints.

To install EV chargepoint assets and expand the existing public charging network

We are committed to play our part in expanding the number of public EV chargepoints across the county and we are determined to deliver the most appropriate charging solution in the right location, to meet the needs of EV drivers and encourage the widespread adoption of EVs.



Strategic Planning and Location Identification

To meet the goals of our strategy and ensure we deliver value for public money, we will take a strategic evidence led approach to planning EV charging infrastructure. Noting any future site selection for public infrastructure is likely to be on a case-by-case basis, we will consider the following as **priorities** as part of any site selection and prioritisation process to target any available public funding:

Land availability:

In this strategy, we can only commit our own assets and land we own or maintain, i.e. Public highway and County Council owned sites.

Residential Parking Demand

Evidence of residential parking demand where home charging is not possible.

Equitable distribution:

Geographical spread of charging points across the county, to address gaps in provision. Includes an equitable mix of commercially attractive high density urban sites and less commercially attractive lower density rural sites.

Demand responsive:

Suitable sites identified by residents in our Countywide EV Survey.

• Electricity supply:

Sites with adequate grid capacity.



Range of Charging Solutions

- Our approach will see a mix of overnight chargepoints and a small number of rapid chargepoints introduced across the county, on residential streets, estates, high streets, and main roads dependent on demand.
- We will also consider utilising our street lighting assets, where these are located kerbside, to provide additional overnight chargepoints.



Delivery Plans

- We will seek to publish delivery plans on the Council's EV website highlighting proposed locations.
- Locations will be subject to local engagement and the availability of funding.

To work collaboratively with partners and stakeholders on the provision and delivery of EV chargepoints across Leicestershire

The County Council acknowledges that the provision and delivery of local chargepoints necessitates a partnership approach. To create a comprehensive charging network, we recognise the value of collaboration with partners and stakeholders across various sectors.



Government Agencies & Transport Bodies

 Work closely with government agencies (Department for Transport, Office for Zero Emissions Vehicles and the Energy Savings Trust) and Midlands Connect for support and to maximise any available funding in line with our Strategy.



Local Communities

- The support and involvement of local communities, businesses and other key stakeholder groups is vital to ensure that the needs and aspirations of local residents are at the heart of our Strategy. Through actively engaging with local residents, businesses and stakeholder groups, we can identify key locations for chargepoints, raise awareness of chargepoint provision and promote EV uptake.
- We will aim to ensure that we engage and communicate with key stakeholders throughout the delivery process, and provide with accurate, timely and appropriate information on our EV charging proposals and any associated construction works.



Local Authorities & National Highways

 Actively seek to collaborate with industry partners, such as Chargepoint Operators (CPO's), District Network Operators (DNO's), and technology companies. These private entities will assist in funding, designing, and implementing chargepoints in locations across the county.



Industry Partners

- Plan and coordinate wider chargepoint delivery across the county with district councils, to ensure a coherent approach and maximise the benefits of EV charging infrastructure across the County.
- Work with neighbouring local highway authorities and National Highways to understand and coordinate cross-boundary opportunities and challenges.



Developers

- In accordance with the Council's Leicestershire Highways Design Guide, work with private developers and landowners through the planning process to ensure adequate provision of public (and private) EV charging infrastructure is part of new developments. In all cases we will expect that charging infrastructure is installed in accordance with the latest Building Regs.
- We are keen to engage with developers and will welcome proposals that incorporate higher levels of provision than that set out in the Building Regs.

To carefully consider how EV chargepoint assets are integrated into the public highway.

It is essential when designing and expanding the chargepoint network that our infrastructure is fully accessible and carefully integrated into the public highway. This means ensuring our chargepoints can be used by anyone that needs them and the appropriate infrastructure is designed to be accessible to all users. It also means chargepoints will not become a new barrier to people walking, wheeling or cycling on our streets. This will benefit everyone, particularly disabled people who may rely on access to a car.



Safety and Security

 We will seek to ensure EV charging infrastructure is located in secure locations and does not impede the safety and security of others, so all people will feel safe using the public charging network, at all times of day and night.



Other Road Users

- We are keen for the highway to remain free of obstructions from chargepoints and trailing cables. We will seek to ensure the infrastructure we install maintains an acceptable pavement width and does not obstruct pavements, carriageways or present a safety risk to pedestrians and other road users.
- Wherever possible we will look to utilise existing parking bays and existing street furniture.
- Parking spaces for EV charging will not be added in places where parking spaces are currently not allowed, nor where they could disrupt traffic flow, cyclists or pedestrians.
- Parking for chargepoints will not replace parking designated for people with a disability or space allocated for bicycle parking.
- Where necessary, we will consider introducing Traffic Regulation Orders (TROs), to safeguard and manage chargepoint parking.



Local engagement

- We will seek to gain local support for infrastructure delivery through local engagement with residents, business and key stakeholder groups.
- All proposed chargepoint locations set out in our delivery plans will be subject to local engagement. We will seek to provide opportunities to express these concerns at a later stage of the process.



Accessibility

- We will solely focus on sites where charging is available for public users, 24 hours a day, and is not dedicated to a private individual or business.
- Chargepoint design and placement will meet all necessary accessibility standards and guidance in accordance with the Equality Act 2010.
- The Council recognises the importance of building an inclusive charging infrastructure and will take account of the latest specifications laid out by British Standard Institution and apply them in so far as they are reasonably practicable.

Seek to facilitate further funding opportunities for EV chargepoint infrastructure

Securing external funding is critical to the successful implementation and expansion of our Strategy ambitions and our partner's delivery plans. Continued Government funding commitments for EV charging infrastructure will be vital to ensure the Council and its partners can continue to help expand the public EV charging network in the longer term.



Local Investment

 Consider opportunities to facilitate targeted local community, parish council or business funded public EV charging infrastructure within the highway.



Government Funding

- The main elements of this Strategy will be delivered through funding from the Office for Zero Emission Vehicles (OZEVs) Local Electric Vehicle Infrastructure (LEVI) funding allocation.
- We will align our proposals with the LEVI funding criteria and submit applications to maximise our chances of success. However, the funding will only go so far, and we will need to explore other government funding, such as opportunities through the Local Transport Fund, tapping into these funding resources to secure financial support for further installation and expansion of EV chargepoints.
- Government funding is vital to fill gaps in provision, help maintain consumer confidence and accelerate the transition. We have a role to play in securing this funding. and enabling the delivery of infrastructure.
- We will take opportunities with our partners to press government for future funding comments for EV charging infrastructure.



Partner Investment

 Through collaboration with private entities such as CPOs, encourage private sector investment to supplement any public EV funding we secure from government. It is essential we adopt a commercial approach, to maximise opportunities to draw in private investment and provide long term certainty on availability, reliability and ongoing maintenance costs and any potential revenue generation.



Provide Third Party Support

 Where possible, seek to support partner led funding bids for public (and private) EV charging infrastructure in off-street locations, such as car parks, workplaces or depots. Through the planning process, we will also seek to support district councils, to secure any potential developer contributions towards EV charging infrastructure.

To ensure the long-term sustainability of chargepoints across Leicestershire

It is vital that we ensure the longevity and sustainability of our chargepoint assets. With a commitment performance to monitoring, innovation, and adaptability, we will work to safeguard the ongoing viability and effectiveness. It is recognised that EV charging is a rapidly changing area, therefore our Strategy and associated Delivery Plans will be reviewed as technology advances and new national policies and funding streams are brought forward to ensure long term sustainability. This will ensure that we are best placed to deliver the wider benefits that the transition to EVs will bring to our county.



Promoting and Raising Awareness

 Promote and raise awareness of EVs, their benefits and charging technology by providing information through our EV website, social media platforms, education, and public campaigns and events.



Adapt and Innovate

- Work closely with our CPO partners to regularly assess our sites to ensure that our charging stations remain up-to-date and capable of meeting the needs of next-generation EVs.
- Subject to further government guidance, work with suppliers to explore future opportunities to embrace new technology and other innovative charging solutions, using homeowner's own electricity supply, such as such as pavement gulley channels.



Alternative Funding Models

 Streets can provide space for electric vehicle charging, but for the most efficient chargepoints – Rapids, Ultra Rapids and charging hubs, more space is needed. We will therefore explore alternative funding models and opportunities to work with CPOs, delivery partners and key landowners to identify suitable sites and develop business cases for these chargepoint types.



Operation and Management

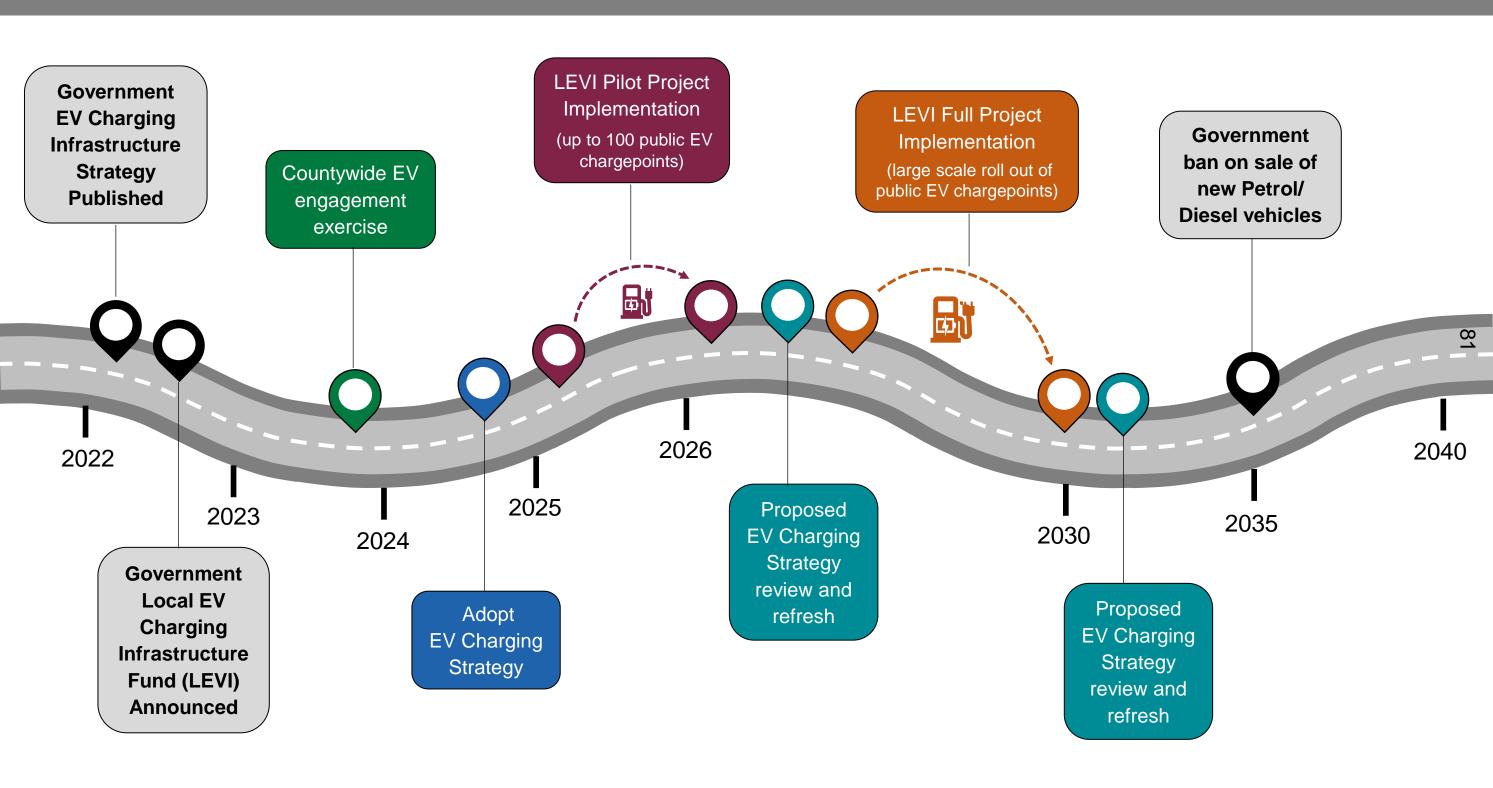
 Our CPO partners will carry out chargepoint maintenance and handle issues raised by customers. In doing so our CPO partner will identify areas for improvement, ensure that chargepoint assets remain operational and well maintained, minimise downtime and enhance the user experience.



Performance Monitoring

- Based on data and intelligence from our CPO partner/s, we will monitor the number of chargepoints installed, usage, and feedback from users to improve the service provided.
- We will continue to monitor and report progress with regards to the number of public charegpoints and the rate of electric vehicle ownership in Leicestershire, as part of suite of Key Performance Indicators (KPIs) that the Council is responsible for delivering against the Council's Strategic Plan (2022-26).

Key Milestones







EV@leics.gov.uk

