Electric Vehicle Charging Infrastructure Plan 2021-24

04 October 2021

Wiltshire Council

Electric Vehicle Charging Infrastructure Plan

2021 - 24

1. Introduction

Wiltshire Council acknowledged a climate emergency in February 2019 and committed to becoming carbon neutral as an organisation by 2030. The Council is investing money to achieve this and is fully committed. The Council is also supporting Wiltshire to work towards becoming carbon neutral by 2030.

Wiltshire Council recognises that the dependency on fossil fuels for transportation is a major contribution to the production of carbon. If Wiltshire Council is to meet its pledge to be carbon neutral by 2030, changing the way we travel is vital.

Following the travel hierarchy of first avoiding travel where possible and then using sustainable travel modes if required, will have a major impact in addressing carbon production. Wiltshire Council recognises being a rural county, access to other forms of travel is a particular challenge. Replacing fossil fuel transport with alternative fuels, such as electric vehicles, will play a major role in addressing climate change challenges and will help in achieving air quality goals.

Government figures estimate that by 2030 thirty percent of all cars in the UK will be electric (in Wiltshire this means 58,200 vehicles based on the 2011 Census). With the ban on the sale of fossil fuel vehicles from 2030 this will only accelerate the move to alternative fuels and electric vehicles.

A major barrier to electric vehicles is the access to charging facilities. In Wiltshire there are currently 19 electric vehicle charging points per 100,000 population (Appendix A). It is forecast that up to 502 public chargepoints will be needed by 2023 to meet demand from residents, businesses, and visitors. Currently Wiltshire Council has 38 charging units with 76 charging points.

The commercial and private sectors play a vital role in providing infrastructure to support electric vehicles. The provision of chargepoints at commercial, retail, business and tourist locations support charging opportunities and increase economic activities in those destinations. In Wiltshire there are over 200 commercially[1] provided chargepoints. Government grants fund the provision of home charging units to permit easy access where residential parking arrangements allow. Commercial and private new builds and redevelopment allows the opportunity for 'designed in' chargepoints. Any solution will be delivered by a partnership of users, and private and public sectors, with the Council setting the strategy in its forthcoming review of the Wiltshire Local Transport Plan and focusing on the outcome, which is an appropriate network to support electric vehicles in the county.

A three-year time period has been set for this electric vehicle plan, covering 2021-24. This short time period allows the plan to focus on what is currently known, what can be practically delivered, and for the electric vehicle market in the UK to mature. The plan will be reviewed regularly to provide opportunity to reflect upon rapid technological and socio-economic change, with a refresh published by 2024 as part of the review of the Wiltshire Local Transport Plan. An important forthcoming document will be the electric vehicle infrastructure guide for local authorities to be published by the Government later this year.

This document sets out a vision, the Council's planned approach in the form of an action log, and how the Council will use data to monitor the impact of the plan.

[1] Zap Map Data September 2021

2. Scope of this plan

This electric vehicle plan covers the following:

EV1 - Destination charging

Publicly accessible off-street chargepoints in destinations. This includes public car parks, retail, leisure, and tourist attractions. Destination chargepoints provide top up charging opportunities and address range anxiety concerns.

EV2 - Residential charging

Chargepoints located at or near electric vehicle owners' homes (these may overlap with destination charging). These serve residents primarily for overnight charging. Chargepoints could be situated at home, on-street or in off-street locations depending on the setting and local constraints. Community charging also falls into this category.

EV3 - Charging hubs

Hub-based charging (a group of chargepoints) at a central location in or out-of-town. Sufficient grid capacity must be available to accommodate high powered charging. Power can also be generated on-site from renewable sources.

EV4 - Charging at Wiltshire Council sites

Chargepoints installed in depots and at Council offices to enable electrification of the Council operational and pool fleet. Sufficient grid capacity must be available to accommodate high powered charging.

EV5 - Workplace charging

Chargepoints installed at workplaces within private car parks for use by a company's employees and fleet vehicles. Workplaces could also provide community charging facilities if the chargepoint is made publicly accessible.

EV6 - Development and transport policies

The application of planning requirements on new developments to ensure planning applications fully provide for future uptake of electric vehicles.

EV7 - Bus and taxi charging

Charging infrastructure that meets the requirements of future electric bus and taxi fleets. Sufficient grid capacity must be available to accommodate high powered charging.

EV8 - Renewable energy generation and supply for electric vehicle charging

The generation of renewable energy to supply electric vehicle charging infrastructure. Renewable energy could either be generated on-site co-located with charging infrastructure or be generated off-site.

3. Outcomes

Vision

Our vision is to maximise the current opportunities to increase the access to electric vehicle charging infrastructure, whilst identifying the emerging technologies, trends, and providers to ensure we deliver on agreed sustainable outcomes.

By implementing this plan Wiltshire Council will:

Lead

- Lead by example by switching the Wiltshire Council fleet of operational vehicles and pool cars to electric vehicles, and by supporting employees to switch to electric vehicles for business travel
- Lead by taking action in areas which the Council directly control
- Lead on securing funding and generating revenue
- Lead on keeping residents, businesses and visitors engaged and consulted on future measures

Enable

- Enable the expansion of a reliable and accessible public chargepoint network that complements commercial networks
- Enable residents without off-street parking to access public chargepoints
- Enable, through planning policy, new developments to install active or passive charging infrastructure
- Enable, through planning policy, businesses to install chargepoints at workplaces

Explore

- Explore opportunities to encourage bus and taxis operators to convert to electric vehicles
- Explore opportunities to encourage taxi operators to switch to electric vehicles
- Explore innovative, agile approaches
- Explore opportunities to generate electric from 100% renewable sources

Partner

- Work closely with the private sector
- Work with town and parish councils and other public sector organisations
- Coordinate with other commercial and public network operators
- Work with renewable energy organisations

4. Plan

Plan approach

The Electric Vehicle Charging Infrastructure plan is addressing the current challenges and aims to set a foundation for future delivery. The plan period is between 2021 - 2024. It is based upon the best available evidence on the Council's current infrastructure, current electric vehicle market at the time of production, and forecasts for how the market will develop over the period covered by the plan and over the next Wiltshire Local Transport Plan period to 2036.

The plan acknowledges that the electric vehicle sector is still in its infancy and will undergo significant changes over the coming years. The Council will adopt an agile approach to respond quickly to technological, market and socio-economic changes. The Council will also identify and adopt innovative approaches to ensure that delivery is effective, and the infrastructure meets the needs of Wiltshire's residents, businesses, and visitors.

EV1 - Destination charging

Priorities for 2021-24

To increase the charging network coverage so every urban community area with a population over 10,000 in Wiltshire has at least one Council sponsored public electric vehicle chargepoint (Appendix e).

To replace the Council's current electric vehicle chargepoint infrastructure where there is a proven need to ensure all electric vehicle chargers are fit for purpose.

To set customer charges at a rate to ensure there is not a cost barrier to access.

To support tourist, commercial and other destination providers with introducing privately operated electric vehicle chargers.

Opportunities

- Wiltshire Council owns and manages public car parks, leisure centres and country parks. These can provide ideal locations for fast charging and the strategic positioning of rapid chargepoints to support local communities, visitors, and en route charging.
  The Council is well placed to consider the location, type, and number of chargepoints in the context of current and future development plans.

- The Council currently provides electric to users without charge, with an estimated spend of circa £25,000 per annum. Introducing a charge will allow the reinvestment of the income generated. This will provide two new charging destination locations and the funding of a grant scheme (£70,000 total, subject to increase if KwH usage increases above projections) to support city, town and parish

councils to provide chargepoints on Wiltshire Council responsible land either direct or through government funding.

- Network operators are likely to fund destination chargepoints in non-Council locations where they can expect a return on investment. Working closely with operators, the Council can maximise private investment while ensuring that provision matches the needs of residents, businesses, and visitors.
- Several private businesses in Wiltshire have already commissioned chargepoints in their car parks. The Council is supportive of commercial networks and welcomes their expansion in Wiltshire as this supports consumer choice, wider geographic spread, and faster rollout rates.

Key stakeholder groups

Utilities companies; town and parish councils; Neighbouring local authorities; landowners; Business Improvement Districts, Chamber of Commerce; Tourism Association.

By implementing this plan, the Council will:

EV1.1 Enable a phased roll-out of destination chargepoints. Locations will be selected to ensure they are fit for purpose, meet current and future demand from residents, businesses, and visitors, fill in gaps in the charging network, and have good access from the strategic road network. Individual sites will be subject to a feasibility study including an assessment of local grid capacity. The initial phases to commence in 2021-22 will include:

Phase one - installation or replacement of more than 8 fast chargepoints in identified public car parks.

Phase two - installation of more than 7 fast chargepoints either new or replacement in public car parks and at other public locations including at leisure centres and tourist destinations.

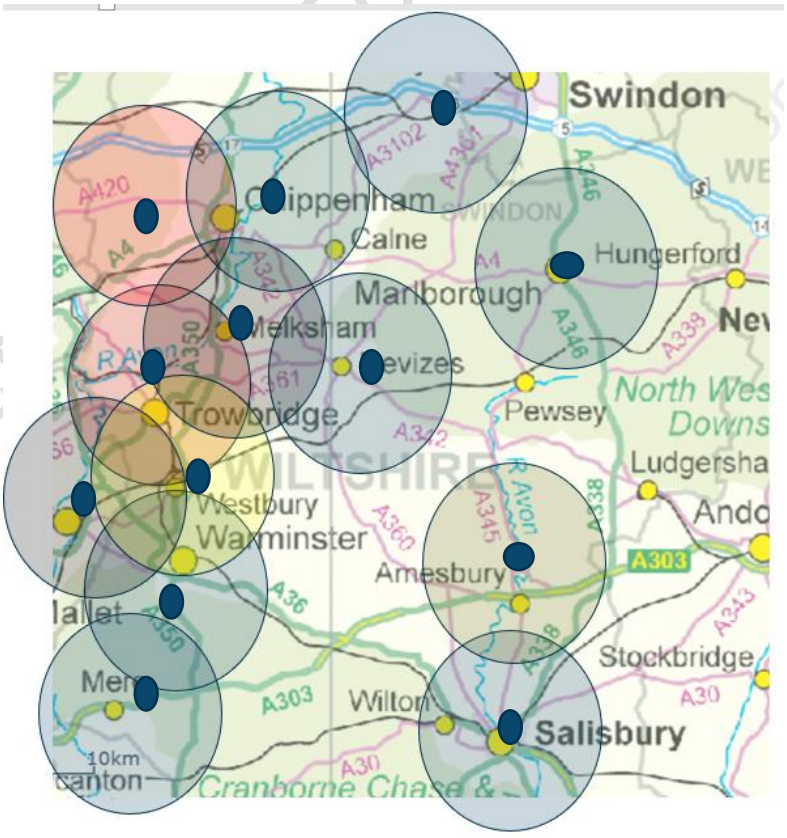
Community areas with a population over 10,000 residents

Name	Status	Population Census 27/03/2011
Salisbury	Built-up Area	44,748
Trowbridge	Built-up Area Subdivision	39,409
Chippenham	Built-up Area	35,800
Melksham	Built-up Area	19,357
Devizes	Built-up Area	18,064
Calne	Built-up Area	17,274
Westbury	Built-up Area	16,989
Warminster	Built-up Area	17,490
Corsham	Built-up Area Subdivision	13,432
Wootton Bassett	Built-up Area	11,265
Amesbury	Built-up Area	10,116

EV1.2 Monitor chargepoint use and other market trends to inform future provision of fast and rapid chargepoints.

EV1.3 Publish an online map of planned or provided chargepoint locations.

Map – Proposed destination chargepoint locations



Ensure the power output of the chargepoints support the local business economy by encouraging visiting to their area by allowing easy access to charging facilities.

Table provides a guide to which chargepoint types will be deployed where:

Chargepoint type guide

Type	Capacity (kW)	Charge time[2]	Dwell Time	Suitable at
Slow	3 – 7	16 hours	7 hours plus	Residential
Fast	7 – 22	2-7 hours	1-7 hours	Destinations, charging hubs or workplaces and en route charging.
Rapid / Ultra Rapid	50+	Up to 1 hour	Less than 1 hour	Destinations, charging hubs, taxi ranks, en route charging, and use by fleet/commercial vehicles

EV1.4 Use capital and revenue funding generated from the introduction of charges to replace the priority public electric vehicle chargers and undertake their ongoing maintenance.

EV1.5 Ensure a customer focussed support function is provided.

EV1.6 Share experience and knowledge with other public bodies to help them expand the public charging network. Wiltshire's town and parish councils play a key role in identifying local electric vehicle charging needs and could help expand the community charging network by installing chargepoints on community spaces such as village halls and parking areas.

EV1.7 Engage with neighbouring local authorities, landowners, other local chargepoint stakeholders, and commercial network operators to ensure coordination of chargepoint delivery. This approach will ensure that resources are maximised and the networks that develop are complementary to one another.

EV1.8 Investigate further capital funding opportunities to enable Wiltshire Council to fund chargepoints partially (concession model) or fully (external supply and maintenance model) in locations less attractive to the private sector. This will ensure a wider spread of chargepoints to encourage electric vehicle ownership in smaller towns and rural areas. The Council will monitor government programmes and other sources of funding and submit bids to eligible funding programmes.

[2] From empty to 80% charge of a 60kWh battery.

EV1.9 Ensure that all charging bays meet all equalities legislative requirements and access for disabled people.

EV1.10 Enforce parking regulations in line with local restrictions. Enforcement will ensure the use of electric vehicle designated parking bays are restricted to electric vehicle use and that electric vehicles are connected and charging. Parking fees will continue to apply at the times stipulated at the car park.

EV1.11 Commit to public chargepoints on Wiltshire Council owned land being supplied with electric from green energy suppliers who produce 100% of their electric from zero-carbon sources.

EV2 - Residential charging

Priorities for 2021-24

Consider the opportunity to allow on-street charging from private properties.

Support city, town and parish councils with securing Office for Zero Emission Vehicle (OZEV) On-street Residential Chargepoint Scheme (ORCS) funding for residential chargepoints on Wiltshire Council land through providing a council grant of up to £2,500 per proposed site per local council per annum.

All electric vehicle charger points provided on Wiltshire Council responsible land will be maintained and operated by Wiltshire Council.

For all electric vehicle charger points provided on Wiltshire Council responsible land to set customer charges at a rate to ensure there is no cost barrier to access and that are competitive with the private sector (Appendix D).

Encourage community charging by signposting the services available from chargepoint providers.

Opportunities:

- As the Local Highway Authority, Wiltshire Council has control over public highways in the County. This includes roads and footways, except for the main strategic routes (A303, A36 and M4) which are the responsibility of Highways England. Through good management practices, with highway authority approval, charging of vehicles on the highway in designated parking areas, where safe and appropriate, can offer a solution for home charging.

- An estimated one fifth of households in Wiltshire have no private off-street parking. Electric vehicle charging represents a challenge for these households. Whilst home charging maybe the cheapest and most convenient way to charge a vehicle for many, it is not the only solution with destination

(EV1), community charging, workplace (EV5), and charging hubs (EV3) offering potential alternatives.

- The Office for Zero Emission Vehicles (OZEV) On-street Residential Chargepoint Scheme (ORCS) grant, administered by the Energy Savings Trust, provides funding for local authorities to install residential chargepoints.

- Charging for electric used, which has been historically provided without charge, will allow for the income to be reinvested by the Council, whether through direct provision or seed funding grants for new electric chargingpoints. A projected £70,000 fund has been identified to allow city, town and parish council provision of chargepoints on Wiltshire Council responsible land either by direct provision or through government grants. This funding is subject to increase if usage exceeds projections.

- Many communities are currently investigating the installation of electric vehicle chargingpoints to further meet their local resident needs.

Key stakeholder groups

Residents; Councillors; town and parish councils; utilities; Energy Savings Trust.

By implementing this plan, the Council will:

EV2.1 Consider the location of residential chargepoints in partnership with local councils. Locations will be identified where there is a high proportion of properties lacking off-street parking and the area demonstrates high demand for chargepoints for grants to be made.

EV2.2 Consider all available residential charging options, with solutions designed to balance the needs of residents, businesses, and visitors, while keeping a safe and accessible network of footways, and minimising the amount of street furniture and clutter. This may include off-street and on-street charging infrastructure. Chargepoints will not be installed in locations where they would restrict footway access. Individual site surveys will be required to assess potential on-street locations; this will be part of any grant funding application.

EV2.3 In partnership with local councils undertake engagement with residential communities, including through a survey, to understand their needs and determine which locations would be best suited for charging infrastructure. Engage with local stakeholders in locations where the potential location of chargepoints could be deemed unwelcome or controversial such as areas where parking is already at a premium.

EV2.4 Support city, town and parish councils with the submission of OZEV ORCS grant application and additional Wiltshire Council funding of up to £2,500 per site where on Wiltshire Council responsible land.

EV2.5 Undertake a feasibility study with a chargepoint supplier into installing, maintaining, and operating chargepoints in Council owned public car parks that are located within a 5-minute walk (400m) of a residential area with a high proportion of households without off-street parking. Chargepoints at these locations may be eligible for ORCS funding.

EV2.6 Enforce Traffic Regulation Orders (TROs) for chargepoints to restrict petrol or diesel vehicles parking in electric vehicle charging bays and limit the length of stay for an electric vehicle to parking only whilst charging. These offences will be enforced through Penalty Charge Notices (PCNs).

EV2.7 Ensure all Council residential chargepoints, both off-street and on-street, will allow public access. Chargepoints will not be considered personal to any individual or business if deemed a residential chargepoint.

EV2.8 Commit to residential chargepoints on Wiltshire Council owned land being supplied with electric from green energy suppliers who produce 100% of their electric from zero-carbon sources.

EV2.9 Encourage community charging facilities by signposting the services available from chargepoint sharing providers. Sharing or renting out of home chargers by electric vehicle owners could significantly increase community access to chargepoints and remove the barriers to owning an electric vehicle in residential areas without off-street parking.

EV2.10 Have a webpage on the Council website for residents to suggest locations for electric vehicle chargingpoints.

EV2.11 Provide guidance to residents where off-street charging is not available on methods to allow on-street charging in a safe and convenient manner.

EV2.12 Develop guidance to define where support for residential EV chargingpoints will be given by the Council.

EV3 - Charging hubs

Priorities for 2021-24

> Seeking suitable site(s), defining scope, and identifying development opportunities.

Opportunities

- Hub charging provides opportunities to meet the needs of a range of users including local communities, business fleet vehicles, visitors, long-distance travel, taxis, multi-modal transport users, freight, and logistics.
- Wiltshire Council is well placed to work with landowners, stakeholders, and operators. Effective delivery will be achieved through partnerships and collaboration across the public and private sector.
- Integrating renewable energy generation and energy storage provides opportunities to overcome electrical grid capacity issues.

Key stakeholder groups

Utilities; landowners; transport fleet operators

By implementing this plan, the Council will:

EV3.1 On the Council's Webpage seek stakeholders' suggestions for possible site locations and solutions.

EV3.2 Explore opportunities to co-locate charging hub facilities.

EV3.3 Engage landowners, stakeholders, and operators to identify delivery model(s) and the role of the Council. Licencing and concession delivery models will be considered.

EV3.4 Commit to public chargepoints on Wiltshire Council owned land being supplied with electric from green energy suppliers who produce 100% of their electric from zero-carbon sources. This will include maximising opportunities for on-site renewable energy generation and energy storage.

EV4 – Charging at Wiltshire Council sites

Priorities for 2021-24

> Charging infrastructure located on the Council estate to enable Wiltshire Council to begin converting its fleet to zero emission vehicles
>
> Seek opportunities to partner with other businesses to support their move to electric vehicles where capacity and access to the Council's workplace charging points allows.

Opportunities

- The Council operates a large and diverse operational vehicle fleet. Large sections of Wiltshire Council's fleet could be replaced by electric vehicles.
- Current technology now makes the cost of smaller electric vehicles (cars and car derived vans) a viable replacement proposition with range and whole life costs comparable to petrol and diesel equivalents.
- The technology for larger and/or more specialised vehicles is still developing, making the whole life costs for those vehicles a riskier financial proposition for the authority. For this reason, the plan is to start small, replace vehicles in phases, and only replace large and or specialist vehicles when the technology is right, and whole life costs have fallen.
- The Council has a large land stock to allow the implementation of Electric Vehicle Chargers where the supporting infrastructure allows.
- The Council works with many partners to support their property and infrastructure requirements allowing them easy access to shared facilities and charging points where this would allow.

Key stakeholder groups

Utilities; internal Council services, partner organisations.

By implementing this plan, the Council will

EV4.1. Carry out a feasibility study across the Council's estate to identify charging capacity and need.

EV4.2. Secure available capital funding from internal and external sources for EVCPs and select an appropriate delivery model upon completion of the feasibility study. Make OZEV residential and workplace charging grant applications to support the capital investment of installing chargepoints. The delivery options being considered are licence, concession or Council funded external supply and maintenance contract.

EV4.3. Install chargepoints in at least two depots and the three main Council offices for use by the operational fleet. Approximately 12 additional chargepoints could support up to 50 cars and car derived vans within the operational fleet by 2024.

EV4.4. Install 10 additional chargepoints at Monkton Park for the use by the Council's electric pool cars and vans.

EV4.5. Install home charging infrastructure for Council standby electric vehicles where they are taken to staff homes. Installing home chargepoints at Council staff homes have been trialled by other local authorities and shown to be an effective approach for meeting fleet charging needs.

EV4.6. Aim to use electric supplied from green energy suppliers who produce 100% of their electric from zero-carbon sources. This will include maximising opportunities for on-site renewable energy generation and energy storage.

EV4.7. Seek agreements with partners to facilitate them using Council workplace chargers to support their move to electric vehicles.

EV5 - Workplace charging

Priorities for 2021-24

> Encourage businesses to install workplace chargepoints for fleet charging, staff use and community charging.
>
> Seek opportunities to partner with other businesses to support their move to electric vehicles where capacity allows.

Opportunities

- Workplaces offer an alternative charging location for people that lack off-street parking at home.
- Workplace charging can support fleet vehicle electrification and encourage employees to travel to work using their own electric vehicle.
- Business networks such as the Wiltshire Chamber of Commerce and Wiltshire Tourism Association engage businesses on a range of issues and are therefore well placed to encourage workplaces to install chargepoints.
- Energy Savings Trust provides independent advice to help businesses reduce transport emissions and adopt electric vehicles.
- The Council works with many partners to support their property and infrastructure requirements allowing them easy access to chargingpoints where capacity would allow.

Key stakeholder groups

Wiltshire Chamber of Commerce; Business Improvement Districts; Visit Wiltshire; Wiltshire Tourism Association and Energy Savings Trust.

By implementing this plan, the Council will

EV5.1 Support Community Area Boards to host workshops targeting businesses looking to install chargepoints, convert their fleet to electric vehicles, and encourage their staff to use electric vehicles for personal use.

EV5.2 Support Community Area Boards to signpost relevant workplace electric vehicle funding opportunities.

EV5.3 Support Community Area Boards to signpost information sources that enable businesses to develop their business case to invest in electric vehicle infrastructure.

EV5.4 Encourage businesses to make their chargepoints available for community charging shared with their local community. This would help people who are not able to charge at home transition to electric cars and could greatly increase the availability of chargepoints across Wiltshire.

EV5.5 Seek agreements with partners to facilitate them using Council workplace chargers to support their move to electric vehicles.

EV6 - Development and transport policies

Priorities for 2021-24

> Include relevant electric vehicle charging policies within the Wiltshire Local Plan (currently being reviewed).
>
> Review the Wiltshire Local Transport Plan (LTP).

Opportunities

- The Wiltshire Local Plan sets out development policies. The planning process provides a mechanism to assist in the delivery of the electric vehicle charging infrastructure.
- The review of the Wiltshire LTP within the next three years will provide the opportunity to strengthen existing commitments to support and encourage low carbon travel opportunities.

Key stakeholder groups

Councillors; town and parish councils; internal Council services.

By implementing this plan, the Council will

EV6.1 Include an electric vehicle charging infrastructure plan within the new local plan for new developments which sets out standards for chargepoint provision (if not already required by other legislation, regulations, etc). Development proposals which include parking facilities or which will be likely to generate vehicle movements will be expected to integrate the provision of infrastructure to enable the charging of electric vehicles into the design and layout of the development.

EV6.2 Strengthen policies (or equivalent) within the Wiltshire Local Transport Plan that support the decarbonisation of the transport sector, alongside mode shift and behaviour change initiatives.

EV7 - Bus and taxi charging

Priorities for 2021-24

> Identify charging infrastructure needs of the bus and taxi sectors operating within the Wiltshire Council area.

Opportunities

- The Bus Strategy for England includes a plan to transition to zero emission buses as part of a £3 billion investment aimed at transforming bus services. The Government has committed to support delivery of over 4,000 zero emission buses. In 2020/21 the Government provided £50 million to deliver the first All Electric Bus Town and announced £120 million for zero emission buses in 2021/22. The Government has also launched the Zero Emission Bus Regional Area (ZEBRA) scheme.
- The Wiltshire Public Transport Strategy is a Local Transport Plan supporting strategy and sets out the Council's vision for a safe, reliable, affordable, and sustainable passenger transport network. The strategy will be updated as part of the forthcoming review of the Local Transport Plan.
- OZEV has provided two rounds of funding under the Ultra-Low Emission Taxi Infrastructure Scheme. The last round of grants was issued in January 2019, totalling £20 million.
- Wiltshire Council is the licensing authority for taxi vehicles and drivers. The licensing conditions that are applied to taxi operators, drivers and vehicles are set out in the Wiltshire Council Taxi Policy.

Key stakeholder groups

Taxi operators; bus and coach operators and utilities.

By implementing this plan, the Council will

EV7.1 Engage with the bus and taxi sectors to understand how the Council can support the transition to electric vehicles.

EV7.2 Investigate potential locations for bus recharging hubs.

EV7.3 Consider the location of destination chargepoints (see EV1) and charging hubs (see EV3) within close proximity to key taxi ranks and drivers' break locations.

EV8 - Renewable energy generation and supply for electric vehicle charging

Priorities for 2021-24

> All chargepoints on Wiltshire Council owned land and chargepoints installed on the Wiltshire Council estate to be supplied with electric from green energy suppliers who produce 100% of their electric from zero-carbon sources.

Opportunities

- Wiltshire Council owns a large property portfolio. There are opportunities to generate renewable energy from these assets co-located at the site of the chargepoints, or at sites located elsewhere. The generation of renewable electric on-site co-located with chargepoints offers an opportunity to reduce the impact of grid capacity constraints.
- Several chargepoint network operators guarantee to buy 100% renewable energy.

Key stakeholder groups

Utilities.

By implementing this plan, the Council will

EV8.1 Insist on all chargepoints on Wiltshire Council owned land to be supplied with electric from green energy suppliers who produce 100% of their electric from zero-carbon sources. The Council will stipulate that all chargepoints should be supplied with electric from renewable sources as a requirement when engaging with any chargepoint operator.

EV8.2 Maximise opportunities to produce renewable energy on Wiltshire Council owned land and the Council estate.

Action Log

Our action log sets out the measures the Council will undertake between 2021-24.

ID	Action	Measure (KPI ID)	Delivery period
EV1	**Destination Charging**		
1.1	Phase 1- Installation of fast chargepoints in public car parks.	1, 2, 3	2021
1.2	Phase 2 – Installation of fast chargepoints in public car parks, leisure centres and tourist destinations.	1, 2, 3	2021
EV2	**Residential Charging**		
2.1	To fund (£2,500 grant) chargepoints in new off-street public locations by city, town and parish councils supported by Wiltshire Council.	7	2022
2.2	Review into residential chargepoints in off-street public locations	1, 2, 3	2022
2.3	Encourage community charging services to increase community access to chargepoints	1	On-going
EV3	**Charging Hubs**		
3.1	Seek stakeholder options for future charging hubs.	6	On-going
EV4	**Wiltshire Council estate charging**		
4.1	Submit OZEV home grant applications for each home chargepoint installed	7	2021/ 22
4.2	Submit OZEV workplace grant application for each Council workplace chargepoint installed	7	2021/ 22
4.3	Install chargepoints at various locations on the Council estate	1, 3	2022
4.7	Seek agreements allowing access to partners to Council workplace EVCPI	6	2022
EV5	**Workplace charging**		
5.1	Host workplace/fleet charging event(s)	6	2022
5.4	Encourage community charging services to increase community access to chargepoints	6	2021
5.5	Seek agreements allowing access to partners to Council workplace EVCPI	6	2022
EV6	**Development and transport policies**		
6.1	Include relevant EV charging policies in the local plan review		2022
6.2	Review the Wiltshire LTP		2024
EV7	**Bus and taxi charging**		
7.1	Engage Bus and Taxi Sectors	6	2022
7.2	Conduct taxi EV survey	6	2021
7.3	Revise the Passenger Transport Strategy as part of the review of the LTP		2024
EV8	**Sustainable energy generation**		
8.1	Insist on all chargepoints on Wiltshire Council owned land to be supplied with electric from green energy suppliers		2021

5. Key challenges we face

The scale of the challenge

Provision

The current approach to electric vehicle charging provision has resulted in an infrastructure which is out of date, in need of repair and replacement, with the location of sites being based upon available Wiltshire Council car parks and ad-hoc grant applications.

There is no capital replacement programme for the existing infrastructure. The provision of electric vehicle charging points is predominantly in the North, West and South of the county. There is no public car charging provision in the rural eastern areas.

Due to the rural nature of many parts of the county private funding is unlikely to be available due to the lack of a return on any investment for infrastructure in low demand areas.

Resident demand

With the government's commitment to remove fossil fuel engines from sale by 2030 motorists will increasingly require easy access to electric vehicle charging facilities.

With the Council's commitment for Wiltshire to be carbon neutral by 2030 there will be the need for the Council to work with national and local partners to ensure that Wiltshire has a fit-for-purpose electric vehicle charging infrastructure.

There is also an expectation from electric vehicle drivers and those considering the move to electric vehicles that the infrastructure is fit for purpose and readily available.

There is a substantial number of residents without access to home charging nationally. There is an expectation that electric vehicle charging will be available to support those residents moving to more environmentally friendly forms of travel and providers of the charging infrastructure will require a coordinated approach to best meet this demand.

Tourist demand

The tourism industry is especially important to Wiltshire. The surge in demand for access to electric vehicle chargepoints in the summer from tourists poses a specific challenge.

To support tourism, Park and Ride sites, visitor car parks and key tourism destinations will need the provision of quick and easy electric vehicle charging facilities.

However, rapid chargers carry considerably more cost than the slower charging infrastructure.

Long term travel behaviour and socio-economic change linked to Covid-19 pandemic

Wiltshire Council has been grappling with the Covid-19 outbreak and the impact it is having on local services and communities. The long-term impact on transport services and demand is yet unknown, but

the transport sector will need to continue to adapt to the ongoing situation for the near future. It is anticipated that there will be a sustained increase in home working and the role of the high street is expected to change following a significant move to online retail. Both changes could see significant shifts in travel behaviours and future electric vehicle chargepoint demand could be impacted by this in different ways.

Innovation

Within the next couple of years, the electric vehicle sector is expected to rapidly innovate as technologies develop and the market matures. Wiltshire Council will closely monitor these innovations and will adopt an agile approach in order that it can progress with delivery and take advantage of new innovations and opportunities as they arise.

This plan identifies several factors about how the electric vehicle sector will develop – things that could/will change, but at this stage it is not clear how. These include:

- How the carbon-based fuel retailer market will adapt – Fuel forecourts are strategically well located to meet local and long-distance charging needs. How the big fuel retailers adapt to the growth of the electric vehicle market and how this will impact the requirement for public chargepoints is unknown at this time but should become clearer through the period of this plan and future strategies/ plans will be required to take account of this.

- Vehicle and battery technology improvements – The electric vehicle models coming to the market in 2021-2022 are increasingly able to deliver a longer range (typically 200-300 miles) from larger capacity batteries and are capable of faster charging times. If this trend continues then the electric vehicles of the future will not require charging as frequently and will be able to charge from empty in five to ten minutes with a compatible ultra-rapid chargepoint.

- Charging technologies - Chargepoints capable of charging at 350 kW are now in use in the UK. As the vehicle and battery technology develops it follows that there is demand for higher capacity chargepoints. There are also other technologies emerging that are currently at the prototype stage including wireless inductive charging, and ‘charging highways’. If these technologies come to market, then this could result in a significant shift away from conventional wired chargepoints.

Commercial Providers

In any emerging market there are winners and losers. The electric vehicle charging market is still relatively new and is composed of several emerging firms, technologies, and standards. This carries risks associated with long term commitments and access to parts and repairs over extended periods. It is vital that whatever the outcome of the inevitable market shakeup, the Council can rely on a provision that is sustainable, ensures best value and excellent customer service.

Electric demand

The utility infrastructure will need considerable updating to meet the increased demand for charging. Electric network companies acknowledge the problem and that investment is are constrained by regulations that only allow them to invest where there is a current proven demand, otherwise the beneficiaries must bear the cost of the provision.

Electric network companies acknowledge the problems, particularly in rural locations. They say their investments are constrained by regulations that only allow them to spread the high costs of strengthening grids if they can prove there is sufficient demand; otherwise, the beneficiaries must bear the full cost themselves.

Legislation and Government Policy

The legislation and government policy regarding the future of alternative fuels will be a major driver in the behaviours of providers and suppliers with their investment in the electric vehicle charging infrastructure. Emerging and new legislation will have to be carefully considered and understood to ensure local outcomes meet the national objectives over a considerable time period which will see major changes.

6. Monitoring our progress

Key performance indicators (KPIs) have been set to monitor progress towards the vision set out within this plan. This plan is evidence driven, using data to drive and monitor change. The KPIs will be reviewed annually to measure progress and to also ensure they remain fit for purpose.

A benchmark will be set in year 1, with annual increase targets.

Key Performance Indicators

ID	Indicator	Measure	Target	Actions	Source
1.	Number of chargepoints	– Total WC public charging devices (funded or part funded) Total WC number of available charging devices (funded or part funded) – Public charging devices per 100,000 population On WC responsible land	20% Annual increase 20% Annual increase 15% Annual increase	EV1.1 EV2.2 EV2.3 EV4.1 EV4.2	DfT Statistics Table EVCD01. Record of Council installations.
2.	Geographical coverage of chargepoint network	– % of settlements with population over 10,000 with public changepoints	100%	EV1.1 EV2.2 EV2.3	GIS analysis
3.	Chargepoint use	– kWh of electric drawn – % chargepoint utilisation – Number of public charging events	10% Annual increase 10% Annual increase 10% Annual increase	EV1.1 EV2.2 EV2.3 EV4.1 EV4.2	Back office data reports
4.	Chargepoint network reliability	– % chargepoint uptime	95%	EV1.1 EV2.2 EV2.3 EV4.1 EV4.2 EV4.4	Back office data report, maintenance logs

5.	Customer satisfaction	– % overall, very satisfied or satisfied with WC public network	75%	EV1.1 EV2.2 EV2.3	Annual survey Engagement with driver forums Complaints log
6.	Community engagement	– Number of engagement activities – Number of individuals, businesses, groups engaged	18 per annum 100 number of businesses engaged	EV1.5 EV2.4 EV3.3 EV7.1	Engagement logs Webpage analytics
7.	Capital funding secured	– £ grant funding	Funding allocation of £70,000 for local council grant applications for EV chargers on WC responsible land	EV2.1 EV4.1 EV4.2	Grant offer letters

7. Links to other Strategies and Plans

The Government's Decarbonisation Transport Plan sets out in detail how to deliver the significant emissions reduction needed across all modes of transport to achieve net zero emissions from transport by 2050. The Setting the Challenge 2020 report published by the Government identifies the decarbonisation of road vehicles as one of six strategic priorities:

The current Wiltshire Local Transport Plan (LTP) sets out several over-arching goals. Figure 2.1 demonstrates how this plan will make a significant contribution to meeting these LTP goals.

Figure - Contribution to LTP Goals

Equality of Opportunity
Improving access contributes to greater equality of opportunity, particularly for those who do not have home charging facilities.

Reduce Carbon Emissions
BEVs produce zero exhaust emissions. Supplying electric from 100% renewable sources maximises the carbon reduction potential.

Supporting the Economy
Commitment to the guiding principles of the Green Knowledge Economy. Low carbon solutions will be favoured where possible.

Improved Quality of Life
Reducing harmful vehicle emissions will improve quality of life for all, improve air quality and the local environment.

Value for Money
Value for money will be achieved by maximising our assets.

Better Safety, Security and Health
Encouraging and supporting safe & sustainable travel, will contribute to improved health.

The Emerging Climate Change Strategy lists these areas for action that align directly with this plan.

Direct

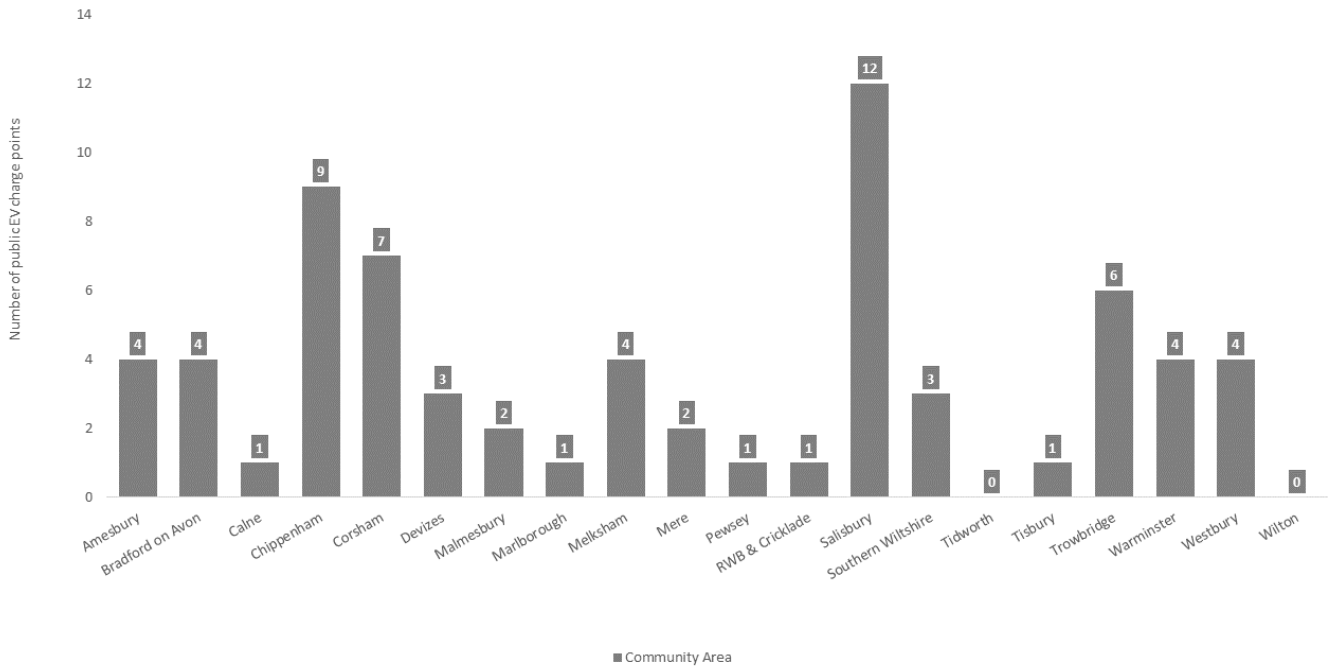
- Maximise ultra-low-carbon vehicle replacement within Council fleet
- Provide EV charging points & other ultra-low-emission fuel alternatives across the Council property estate
- Understand key risks and potential costs posed by climate change
- Mainstream climate resilience in future strategies and policies

Indirect (through services)

- Improve low-carbon transport infrastructure by embedding it in the Local Plan and Local Transport Plan
- Encourage decarbonisation of road transport through development of EV charging network & promotion of low emissions transport vehicles

Appendix A

Reducing carbon emissions



Reducing carbon emissions is a priority for Wiltshire Council. The Council passed a motion entitled 'Acknowledging a Climate Emergency and Proposing the Way Forward' on 26 February 2019 that included the ambition to "Seek to make the County of Wiltshire carbon neutral by 2030". A task group of the Council's Environment Select Committee has been set up to develop recommendations and a plan to achieve this challenging ambition. The findings of this process will feed through to the Council's review of its business plan, local plan and local transport plan. In addition, a regional study of electric vehicle infrastructure including chargepoint provision is being progressed by the Western Gateway Sub-national Transport Body.

In Wiltshire there are 19 charging devices per 100,000 population compared to 23 in the UK, 22 in England and 21 in the South West. These figures show that the number of these in Wiltshire per 100,000 population is not much below the England or South West average. Wiltshire Council is not complacent about this, however, and is seeking to take advantage of realistic opportunities to improve the electric vehicle charging offer in Wiltshire. For instance, where the Council is carrying out development of its own estate, consideration is being given to installing new electric vehicle chargepoints.

Current projects include:

1. Twelve chargepoints are planned (with ducting installed for more) in the Sadler's Mead Multi-Storey car park project in Chippenham.

2. Two chargepoints are planned for the Melksham Campus.

3. Two chargepoints are planned for the Warminster Depot refurbishment.

4. Chargepoints are proposed but not yet specified for the High Post and Royal Wootton Bassett Depot refurbishment projects, and the Porton Science Park build. The Council is also awaiting with interest the publication of the Government's 'Future of Mobility: Rural Strategy'.

5. A feasibility study into EV chargepoints for the Council's workplace has been tendered with Fleet Services capital funding agreed to increase the EV charging access for council vehicles (Appendix C).

Definition: Electric vehicle public charging points.

Data Source and Time Period: https://www.zap-map.com/live/, November 2019.

Appendix B

Destination – Electric Vehicle Charging Funding Outcomes

Existing Sites To Be Replaced	
Fast Chargers Locations – 7kw Supply x 2 per unit	**Units**
Devizes – Station Road, Devizes, SN10 1BZ	1
Royal Wootton Bassett – Borough Fields – SN4 7AX	1
Amesbury – Central – Salisbury Road, Amesbury, SP4 7JE	1
Westbury – High Street- Zone A – BA13 3BW	1
Trowbridge – County Hall – Library Car Park	1
Corsham – Springfield Community Campus, Beechfield Road, SN13 9DN	2
Bradford on Avon Station Car park, BA15 1DQ	2
George Lane Car Park, Marlborough, SN8 4BX	2
Salisbury Beehive Park & Ride, SP4 6BT.	2
Salisbury – Five Rivers (Campus) -Hulse Rd, Salisbury, Wiltshire	4
Salisbury, Britford – SP5 4DS (Park and Ride)	1
Salisbury, Petersfinger – SP5 3BZ (Park and Ride)	1
Salisbury, London Road - SP1 3HP (Park and Ride)	1
Number	20

Rapid Chargers - 44kw Supply	
Melksham: King Street SN12 6HB	1
Trowbridge: Lovemead Car Park, BA14 8EA	1
Corsham Post Office Lane: SN13 0BS	1
Salisbury: Brown Street (West) SP1 1HE	1
Warminster: Central Car Park, BA12 9BR	1
Chippenham Gladstone Road: SN15 3DW	1
Number	6

New Sites/ Funding		
WC Funded (All 7kwh Chargers)	Funding	Sites
Church Street, Calne		1
Additional Site or New Priority Replacement(s)		1
Community Led	70000	
Totals	£70,000	2

Appendix C

Wiltshire Council Fleet Funded Sites

(Feasibility Study and Provision Where Infrastructure Allows)

Office Hubs:

- County Hall, Bythesea Road, Trowbridge, Wiltshire, BA14 8JN
- Bourne Hill, College Street, Salisbury, Wiltshire, SP1 3UZ
- Monkton Park, Chippenham, Wiltshire, SN15 1ER

Gritter Sites:

- Amesbury Depot, High Post Crossroads, Amesbury, Wiltshire, SP4 6AS
- Chippenham Depot, Parsonage Way, Chippenham, Wiltshire, SN15 5PT
- Marlborough Depot, Salisbury Road, Marlborough, Wiltshire, SN8 4AE
- Royal Wootton Basset Depot, Marlborough Road, Royal Wootton Bassett, Wiltshire, SN4 7EP
- Warminster Depot, Bath Road, Warminster, Wiltshire, BA12 8PF

Vehicle Hubs:

- Churchfields, Stephenson Road, Salisbury, Wiltshire, SP2 7NP
- Kennet House, Sergeant Rogers Way, Devizes, Wiltshire, SN10 2ET
- Parsonage Way, Chippenham, Wiltshire, SN15 5PT
- Riverway Industrial Estate, Shails Lane, Trowbridge, BA14 8LN
- Five Rivers Leisure Centre, Hulse Road, Salisbury, SP1 3NR
- Additional Locations:
- Bath Road, Chippenham, Wiltshire, SN14 0AD
- Chippenham Library, Market Place, Chippenham, SN15 3EJ
- Melksham Campus, Market Square, Melksham, SN12 8DQ

- Melksham Depot, 24 Hercules Way, Bowerhill, Melksham, Wiltshire, SN12 6TS (Operated by Ringway)
- Warminster Library, Three Horseshoes Walk, Warminster, BA12 9BT
- Wilton Depot, The Avenue, Wilton, Wiltshire, SP2 0BT
- Wilton Unit 3, Barnack Industrial Estate, Kingsway, Wilton, SP2 0AW

Appendix D

How public charging points compare on price

10-80% charge for a BMW iX3 with an 80kW battery (74kW usable capacity)

Network and tariff	Monthly fee	Charge fee	Cost per unit	Total cost	Per KwH
Source London Flexi 7.4kW*	N/A	N/A	7.3p/min	£40.66	0.59
Source London Flexi 22kW*	N/A	N/A	13.3p/min	£38.79	0.36
Ionity 350kW	N/A	N/A	69p/kWh	£35.74	0.69
Source London PAYG 7.4kW	N/A	N/A	8.4p/min	£35.28	0.68
Source London Full 7.4kW	£4.00	N/A	5p/min	£25.00	0.41
Source London PAYG 22kW	N/A	N/A	15.7p/min	£22.18	0.43
BP Pulse Subs 150kW	£7.85	N/A	27p/kWh	£21.84	0.27
BP Pulse PAYG 150kW	N/A	N/A	42p/kWh	£21.76	0.42
BP Pulse PAYG Contactless 150kW	N/A	N/A	42p/kWh	£21.76	0.42

Appendix E

Population Census 27/03/2011

Name	Status	Population Census 27/03/2011
Salisbury	Built-up Area	44,748
Trowbridge	Built-up Area Subdivision	39,409
Chippenham	Built-up Area	35,800
Melksham	Built-up Area	19,357
Devizes	Built-up Area	18,064
Calne	Built-up Area	17,274
Westbury	Built-up Area	16,989
Warminster	Built-up Area	17,490
Corsham	Built-up Area Subdivision	13,432
Royal Wootton Bassett	Built-up Area	11,265
Amesbury	Built-up Area	10,116

Appendix F

Comparison with Neighbouring Authorities

Authority	Fast Chargers – KwH	Rapid Chargers – KwH
Test Valley Borough	35p per KwH	No Solution
Bath and North East Somerset	30p per KwH plus 50p connection fee & 31p per KwH	No Solution
Bristol City Council	30p per KwH plus 50p connection fee	30p per KwH plus £1 connection fee
Cornwall	35p per KwH	35p per KwH
Devon County Council	No Solution	No Solution
Dorset	30p per KwH	39p per KwH
North Somerset	30p per KwH plus 50p connection fee	30p per KwH plus £1 connection fee
Plymouth	25p per KwH	No Solution
Swindon Borough Council	30p per KwH	Information Not Available At Time Of Report

Appendix G

On-street Vehicle Charing Policy

Temporary Provision

Vehicles should be parked as close to the property as possible. Where a vehicle cannot be parked immediately opposite the property, the cable should be run along the carriageway channel against the kerb. The recommended maximum distance from a point opposite the property is 10 metres (approximately two car lengths).

The cable should not cross the carriageway therefore your vehicle should always be parked on the same side of the road as your property.

Any vehicle parked on the Highway must always adhere to any local parking restrictions that may be in place and should not obstruct the footway.

Whenever you are charging your vehicle, you should always follow all guidance and recommendations in your manufacturer's handbook (this may differ depending on the vehicle).

Any extension lead that is required should be suitable for external use. You should read any instructions on the correct use provided with your extension lead.

Cables should be laid flat and never be extended from an upper storey to a vehicle, nor should they be hung from any street furniture including lamp columns or trees.

A cable should only be placed over the footway when the vehicle is charging and should always be removed when not in use.

It is the resident's responsibility to ensure that the cable does not cause a danger or a nuisance to the public.

The most suitable solution for getting the cable from your property boundary to your vehicle safely is to use a suitable cable protector. Cable protectors are regularly used in public spaces and areas of high footfall to cover cables or wires on a temporary basis.

Any cable protector used should cover the area likely to be walked across, including the full width of any footway and verge between the property and the vehicle.

The cable protector should be non-slip, have contrasting colour markings e.g. yellow, have anti-trip sloped sides, and be of a tough construction suitable for outdoors use and suitable for use in a pedestrian environment.

Currently an electric vehicle charging cable does not require a licence. However, as policies are reviewed and updated this may change in the future.

This is an interim situation, should a future policy differ from this approach we will require you to adher to the new policy.

Permanent On-Street Charging Provision

Permanent on-street vehicle charging scheme allows electric vehicle-driving homeowners to take advantage of their own power supply with a more permanent solution. The charger is installed onto the building wall and powered from the householder's consumer unit allowing the user to take advantage of their own energy connection to reduce transportation costs.

The homeowner provides the package which would consist of:

- A chargepoint with Type 2 socket – weatherproof and ensuring the electric theft is not possible and is located in a position as not to encroach upon the highway.
- Smart energy meter - for energy usage monitoring.

- An extra-long electric vehicle charging cable – stored in the home.
- The installation of a special cable gulley installed in the pavement from the household to the adjacent parking area by a licenced contractor – to prevent trip hazards for pedestrians on the street.
- The homeowner is responsible for the gulley cleaning and use.

Home chargers

Type:	APT eVolt Home Charger and Cable Channel
Power output:	3.7kW
Access:	Smart energy meter
Payment:	Domestic electricity tariff
Features:	Resident can use own home power supply

Figure 3: On-street charging technologies included in the Go Ultra Low Oxford trial.