



Cheshire West & Chester Council

Electric Vehicle Charging Infrastructure Strategy



Cheshire West
and Chester

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Electric Vehicle Charging Infrastructure Strategy (2023-2027)

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Summary of commitments

Policy 1: Electric vehicle charging infrastructure as part of a holistic, inclusive, low carbon transport system

The Council will seek to support the roll-out of electric vehicle charging infrastructure as part of the development of a holistic, inclusive, low carbon transport system, using an “Avoid, Shift, Improve” hierarchy. The roll-out of electric vehicle infrastructure should support wider measures that reduce demand for travel and shift trips to walking, cycling and public transport.

Policy 2: Socially inclusive electric vehicle charging infrastructure

The Council will seek to ensure that the roll-out of the electric vehicle charging network ensures that no community is left behind. This includes:

- Ensuring that the transition to electric vehicles does not ‘lock in’ car dependency by coming at the expense of promoting travel reduction, active transport and public transport.
- Ensuring that investment in charging infrastructure is appropriately balanced between urban and rural areas, in line with emerging demand.
- Promoting the use of electric car clubs, which can offer a more affordable alternative to private vehicle ownership for occasional car users.
- Ensuring that charging infrastructure meets latest national accessibility standards, particularly working towards compliance with BSI PAS 1889:2022.

Policy 3: Council-led delivery of electric vehicle charging infrastructure

The Council will seek to enable and encourage deployment of an inclusive public charging infrastructure network suitable to meet predicted demand in line with national targets. Where we procure the installation of new infrastructure, we will prioritise:

- Fast chargers at key destinations such as town centres, leisure centres and other key amenities, to serve destination charging and e-car clubs.
- Standard chargers in residential areas with limited off-street car parking, to cater for areas of high forecast overnight charging demand.
- Rapid and ultra-rapid chargers in selective town centre locations, primarily designed to serve electric taxis, fleet vehicles and e-car clubs.
- Investigation of the viability of installing appropriate charging infrastructure at Chester Park & Ride sites.

We will seek to meet or exceed regional levels of public electric vehicle charging infrastructure per 100,000 population by 2025 and meet or exceed the same metric nationally by 2030.

The Council will seek external funding to ensure development of a self-sustaining electric vehicle charging network which does not rely on continuing public finance support in the future and minimises the impact on existing and future Council budgets.

Procured electric vehicle charging infrastructure should be capable of using the Open Charge Point Protocol (v.1.6 or above), which is promoted as the best way to provide the widely available and accessible recharging networks of the future. This would improve functionality, reduce maintenance costs, and also allow an easier transfer of assets into any new operators if a change of supplier is required in the future.

Policy 4: Home charging for properties without off-road parking

Recognising that a lack of off-road parking is a significant barrier to electric vehicle adoption, the Council will promote a hierarchy of solutions to electric vehicle charging for residents, businesses, and shared vehicles without access to off-road parking, which prioritises off-street charging hubs within a 400-metre walking distance (approx. 5-minute walk), followed by other low-impact solutions which avoid generating additional street clutter and maintenance/ management challenges.

The Council will continue to develop our customer service process for the management and recording of requests for residential electric vehicle charging infrastructure to inform future deployment of charging hubs and on-street solutions.

Policy 5: Electric vehicle charging infrastructure for staff, partners and fleet

The Council will support staff and visitor access to electric vehicle charging at Council premises. We will develop staff electric vehicle charging policies to set out how staff and fleet electric vehicle charging infrastructure should be used.

Where technology allows, the Council will seek to transition its fleet to ultra-low emission vehicles, in line with our target to achieve net zero carbon operations by 2030. To achieve this, we will progress a systematic Fleet Review to inform the electrification of the Council's own vehicles, including exploring innovative options to support electric vehicle charging at depot sites. We will explore opportunities to combine procurement, installation and operation of fleet, workplace and public charge point infrastructure where this is practical, safe and feasible.

Policy 6: Electric vehicle charging infrastructure in new developments

All relevant developments and renovations must deliver electric vehicle charging infrastructure which meets at least national minimum Building Regulations standards from June 2023, as set out in "Approved Document S" ([Infrastructure for charging electric vehicles: Approved Document S - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/101421/Approved_Document_S_-_Electric_Vehicles.pdf)).

We will explore the case for a future update of the Council's Parking Standards and broader development management guidance to align with national requirements and better reflect the Council's strategic approach to transport in new developments.

For the avoidance of doubt, these requirements will apply equally to developments where the Council and its partners are acting as site promotor or developer.

The provision of electric vehicle charging infrastructure will not be a valid justification for additional parking spaces within a new development than would otherwise be included.

Policy 7: Electric ‘taxis’

The Council will use its licensing powers to mandate a transition to ultra-low emission vehicles. From January 2025, all new applications for hackney carriages and private hire vehicles must be ultra-low emission vehicles. For full details, see the Council’s Licensing Policy: [Statement of licensing policy | Cheshire West and Chester Council](#). We will use our roll-out of public charging infrastructure to support the taxi trade where practical and relevant.

Policy 8: Using the Council’s broader influence

The Council will seek opportunities to encourage organisations, businesses and other owners of commercial public and customer car parks (including local town/parish councils) to deploy public electric vehicle charging infrastructure where appropriate, outside the development management process. This includes working with Council-owned companies such as Brio to manage electric vehicle charging infrastructure roll-out on their sites. These sites also have the potential to provide benefits for local residents at times of low commercial demand, such as overnight charging.

The Council will promote and support efforts to improve the availability of rapid and ultra-rapid electric vehicle charging on and near the strategic and major road networks, where appropriate and in line with local and national planning policy.

Policy 9: Wider public information and promotions

The Council will use our existing online presence to signpost information to dispel myths about electric vehicles and promote the potential benefits of electric vehicle transition as part of a wider sustainable mobility framework.

The Council will promote private electric vehicle charging infrastructure sharing schemes to maximise charging availability across the borough.

Policy 10: Procurement

The Council will undertake systematic market engagement to determine the best methodology for procurement of one or more supply partners, with a view of adopting a holistic ‘strategic sourcing’ approach to provision of a full array of electric vehicle charging infrastructure types across the borough – including public, fleet and workplace charging. We will investigate the potential of opening this opportunity up to partner organisations, including town/parish councils, local NHS bodies and business partners.

Policy 11: Monitoring

The Council will establish and undertake a systematic process of monitoring utilisation rates and tariffs across electric vehicle charging infrastructure within the borough, including liaison with the commercial sector, to explore potential for increased coordination and determine the optimum time to bring forward further electric vehicle charging infrastructure. As electric vehicle uptake increases, monitoring usage will also allow us to provide additional chargepoints at or near sites of particularly high demand to reduce risks associated with drivers queuing to charge their vehicles.

Policy 12: Smart charging, renewable energy generation and energy storage

The Council will seek to increase the emissions reduction benefits of electric vehicles and mitigate the impact of the charging network on the local and national grid by promoting the use of renewable energy for electric vehicle charging, encourage 'off-peak' use of electric vehicle chargers, and exploring technical options to manage grid demand from electric vehicle charging infrastructure. This will include encouraging, where appropriate, the consideration of on-site renewable generation and storage infrastructure and setting parking policies which encourage the use of electric vehicle charging infrastructure in Council car parks at 'off-peak' times.

Policy 13: Engagement with the distribution network operator

Noting that the provision of cost-effective power connections will be fundamental to the delivery of charging infrastructure, the Council will continually engage and work in partnership with Scottish Power Energy Networks to address key points of weakness in the power network holding back the delivery of key electric vehicle charging infrastructure programmes promoted by the Council and its strategic partners.

Policy 14: Situating electric vehicle charging infrastructure

The Council will only support or procure installation of charging infrastructure which:

- Does not obstruct pavements, cycleways or highways, or present a safety risk to any road users, particularly vulnerable road users. Charging infrastructure should not be located on the pavement.
- Does not require trailing cables across the pavement unless adaptive infrastructure is provided, and no trip hazard is created.
- Does not disrupt traffic flow, including for cyclists, and do not impede pedestrian movements.
- Does not introduce additional car parking where parking spaces are not currently provided or allowed.
- Avoids the creation of additional unnecessary street clutter.
- Complies with local and national planning policy.
- Meets national accessibility standards and guidelines, particularly working towards compliance with BSI PAS 1889:2022 Electric Vehicles Accessible Charging.

The planning of all installations will fully consider liabilities, planning consents, road safety implications, positioning, management and accessibility requirements in line with the latest technical standards and national best practice.

Wherever appropriate, we will use electric vehicle charging infrastructure installations as an opportunity to collocate multimodal facilities, such as cycle parking and bus stop infrastructure.

1. Setting the scene

1.1. Policy context

In 2019, Cheshire West and Chester Council voted unanimously to declare a climate emergency. The Council agreed:

- that climate change presents a threat to our way of life
- the need to act in-line with worldwide agreements on climate change and the best available evidence, which states that, to limit emissions to 1.5°C, there is a requirement to reach 'net zero' by 2045
- the Council must play its part by evidencing leadership on this issue.

The Cheshire West and Chester Climate Emergency Response Plan¹ sets out the Council's ambitious strategy for supporting the borough to achieve the highly challenging target of carbon neutrality ("net zero") by 2045.

The Department for Transport's Transport Decarbonisation Plan² notes that transport is the largest emitting sector across the UK, amounting to 27% of emissions in 2019. Unlike other sectors, emissions from transport have remained relatively static over the last thirty years. Road emissions comprise over 90% of transport emissions and the majority of these road-based emissions arise from private cars. Improvements in vehicle efficiency has been largely offset by an increased number of journeys, higher car ownership and a tendency towards larger vehicles. As a key part of achieving net zero carbon emissions by 2050, the UK government has set out its intention to end the sale of new petrol and diesel cars by 2030, with all new cars being zero emission at the tailpipe from 2035.

Car use in Cheshire West and Chester borough is high, accounting for over 2 billion miles travelled in 2019³. In addition to being a major contributor to climate change, road transport emissions also generate significant issues for air quality, with over half of nitrous oxide emissions in Chester City Centre caused by road traffic. Four areas in the borough have been declared as Air Quality Management Areas due to breaching air pollution limits.

The Council's Climate Emergency Response Plan and Low Emission Strategy⁴ set out a tiered approach to addressing these challenges:

- *Avoid* – reducing overall motorised travel demand, facilitated by increased digitalisation of working and key services, as well as increased walking and cycling use. This also comes with important wider strategic benefits, including improved health through reduced levels of physical inactivity and improved air quality, reduced congestion and increased footfall for local businesses⁵.
- *Shift* – reduce car travel by shifting a significant proportion of trips to public transport.

¹ [The Climate Emergency | Cheshire West and Chester Council](#)

² [Transport decarbonisation plan - GOV.UK \(www.gov.uk\)](#)

³ [Road traffic statistics - Local authority: West Cheshire \(dft.gov.uk\)](#)

⁴ [Low Emission Strategy | Cheshire West and Chester Council](#)

⁵ See pages 9-10: [Gear change: a bold vision for cycling and walking \(publishing.service.gov.uk\)](#)

- *Improve* – Where car travel is unavoidable, all vehicles should to be low or zero carbon by 2050. Necessary car trips should use shared electric vehicles (e-car clubs or lift sharing) where this option is available. The transition to electric vehicles also brings wider benefits, such as improved health outcomes due to better air quality.

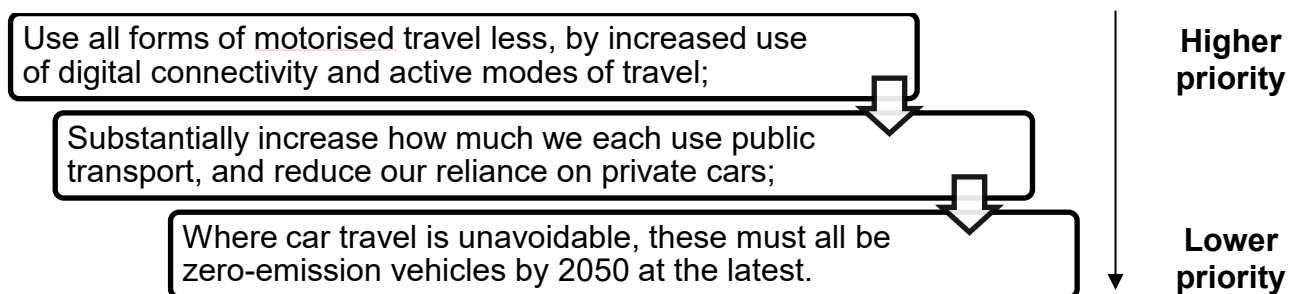


Figure 1: Avoid, Shift, Improve – Cheshire West and Chester Council’s Transport Decarbonisation Hierarchy

This Strategy sets out the Council’s approach to supporting the transition to electric vehicles within this framework – namely, where other travel options are unavoidable. Comprehensive, accessible, and efficient charging infrastructure is essential in enabling the mass adoption of electric vehicles and this strategy sets out our plans to help realise this goal.

While the Council has an important role in driving and enabling change, achieving a net zero carbon borough is not something we can deliver in isolation. As such, this strategy also sets out how the Council will work with partners, businesses, and residents to support the transition to zero emission transport.

A full review of national, regional and local policy is contained in Section 1 of the supporting Policy Databook published alongside this strategy.

1.2. Technology context

Uptake of electric vehicles is still at an early adopter stage. As of early 2023, there were 151 BEV models available on the UK market. However, the second-hand electric vehicle market is still small, comprising just over 3% of the used car market in 2021⁶. The battery capacity of electric vehicles is growing, with most new vehicles delivering at least 200 miles per charge, but the provision of public infrastructure will also need to cater for the continued use of older models with lower range capacities moving forward.

The time an electric vehicle takes to charge is also dependent on the type of charger. Different ‘speeds’ of charging infrastructure are suitable for different use cases, ranging from overnight charging in a residential context to charging times of less than half an hour at motorway service stations for on-route charging on longer distance trips. Several trials are currently being conducted assessing the potential of different methods of wireless charging, but this is not yet mass-market technology incorporated in most commercially available vehicle models and is therefore not the focus of this strategy.

⁶ [Record year for second-hand EV sales as used car market grows | RAC Drive](#)

Smart charging technology offers significant potential to improve the performance of charging infrastructure, including optimising charging schedules to make use of lower-cost energy tariffs outside peak hours.

Electric vehicles are currently the only mature technology offering a workable alternative to internal combustion engine vehicles. While hydrogen and hydrogen fuel cells are likely to be a fundamental part of a decarbonised transport system in the longer-term, its use is likely to focus on heavier vehicles that might be unsuitable for standard electric vehicle systems, such as buses, heavy goods vehicles, shipping and aviation.

A full technology review is contained in Section 2 of the supporting Policy Databook published alongside this strategy.

1.3. Electric vehicle uptake and current infrastructure provision

Figure 2 below demonstrates that ownership of electric vehicles in Cheshire West and Chester has been growing rapidly in recent years, although they currently make up only a small proportion of the overall vehicle fleet. 21.9% of all new cars sold in April 2023 were either fully electric or plug-in hybrids⁷.

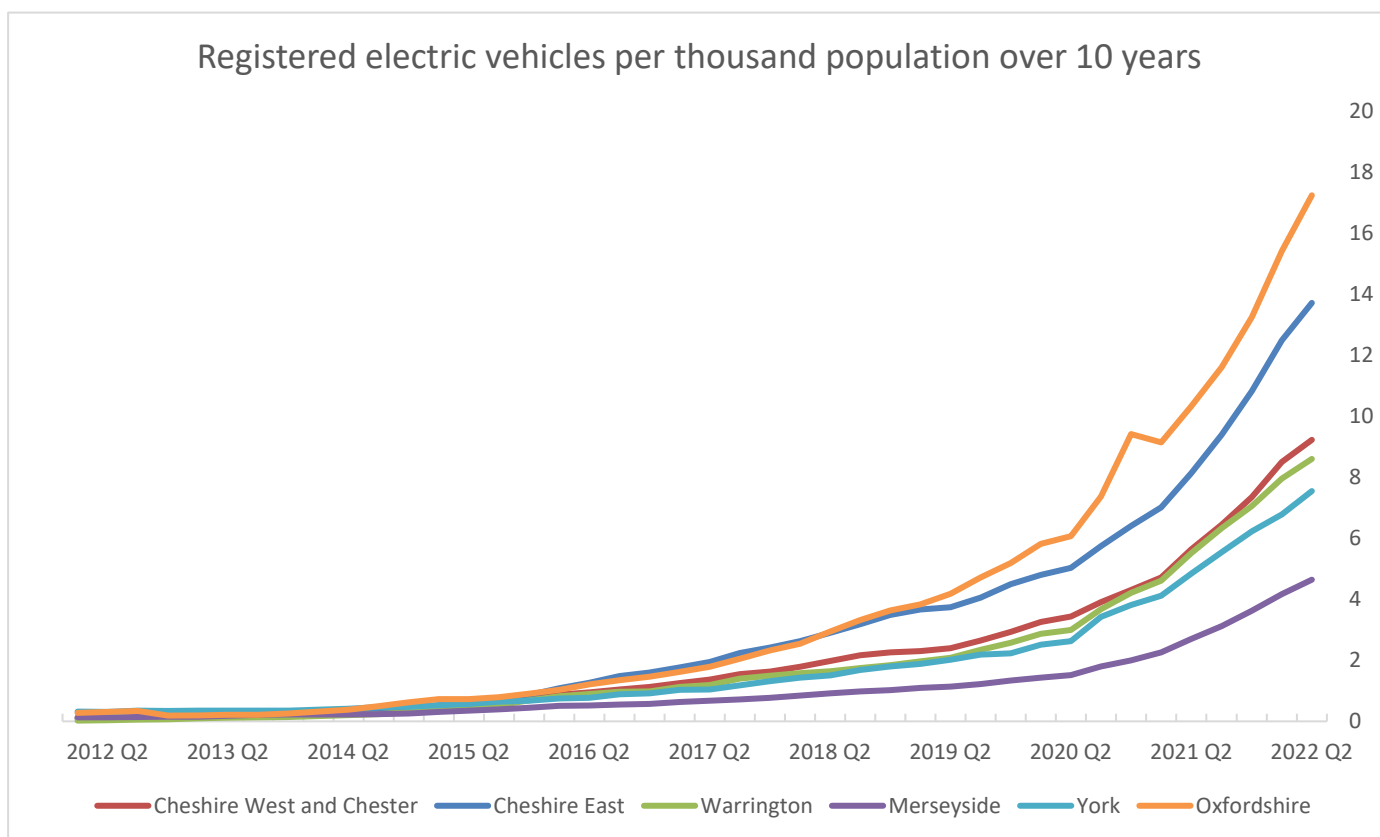


Figure 2: Registered electric vehicles per 1000 population (2012 – 2022) (Source: ONS)

Despite this growth in electric vehicle uptake, the current distribution of charging infrastructure across the country remains heavily biased towards London and the South

⁷ [How many electric vehicles are there in the UK - electric vehicle market statistics 2023 \(zap-map.com\)](https://zap-map.com)

East of England, which account for 44.1% of all chargepoints compared to 6.2% within North-West England. There are currently 150 public chargepoints within Cheshire West and Chester borough. As shown in Figure 3 below, this is marginally behind the regional average based on population.

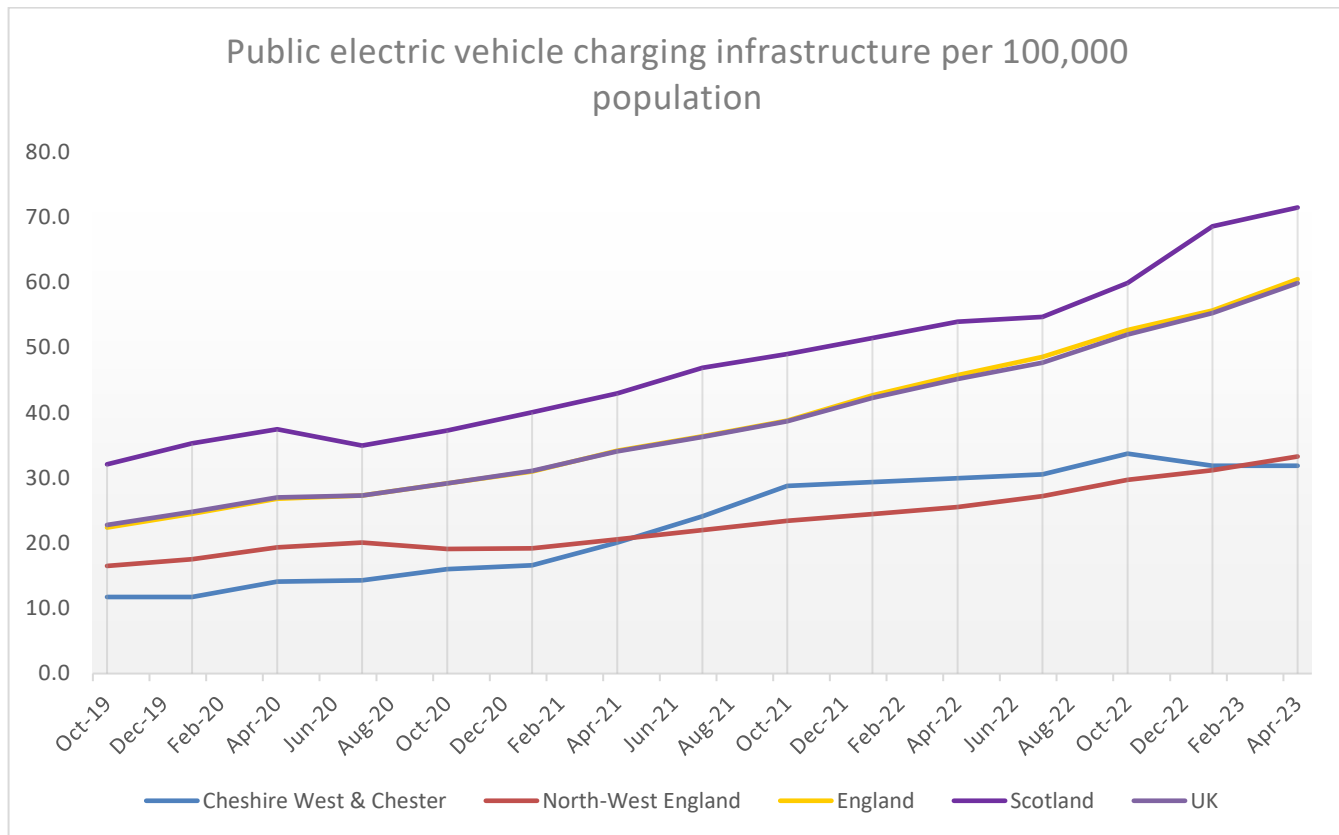


Figure 3: Regional comparison of public charge points per 100,000 population

Figure 4 shows the locations of the existing electric vehicle chargers within the borough, categorised by charging speed. Of these, the Council currently owns and operates 34 standard/ fast chargepoints located in eight Council car parks across the borough, as well as 2 rapid chargepoints located adjacent to the National Waterways Museum in Ellesmere Port. There is less charging infrastructure in the more rural central and southern regions of Cheshire West and Chester, with no rapid / ultra-rapid chargers and few fast chargers in operation at the time of writing. While some chargepoints have been installed in urban areas, these are relatively few compared to the higher population densities in these areas. Furthermore, limited charging infrastructure along key corridors such as the A41, A49 and A51 reduces the viability of on-route charging.

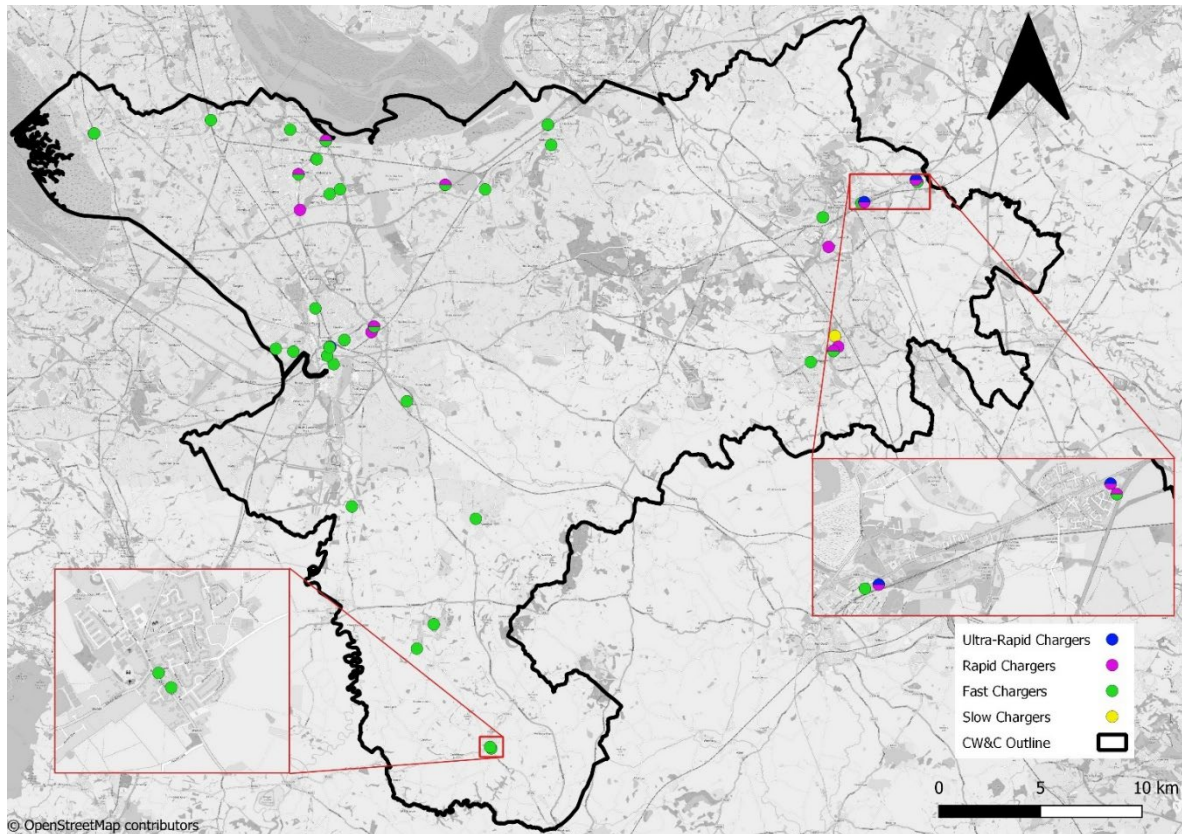


Figure 4 – Public electric vehicle charging infrastructure in Cheshire West and Chester
(Source: Zap-Map)

1.4. Engagement and consultation

During the initial development of this strategy, engagement took place with a wide range of technical leads across the council, facilitated by Jacobs Consulting and Zero Carbon Futures. The key themes identified as part of this process are summarised below:

- It is critical that the transition to electric vehicles is part of a multi-modal strategy and does not lead to electric vehicle trips replacing public transport and active travel trips.
- Across the industry more widely, there is a need for upskilling, training, and capacity of the supply chain in delivering electric vehicle charging infrastructure.
- Continuous engagement with the Distribution Network Operator is essential to ensure that there is sufficient capacity available in areas of high demand.
- It is important that the strategy balances the need for revenue generation against social inclusion. The approach taken should maximise private sector involvement to ensure the best possible value for money is achieved in the rollout of new infrastructure
- Opportunities were identified to utilise Chester Park and Ride sites as multi-modal hubs, to maximise energy generation and storage in order to minimise load on the electrical grid and to facilitate a shift of 'last mile' deliveries to electric micro-mobility solutions.
- The importance of user interface was recognised, particularly the ability for users to interact with the same interface and/or mobile application via an 'easy to use'

registration scheme to reduce complexity and improve uptake of electric vehicles.

A public consultation on a draft version of this report took place in Spring 2023. A detailed review of responses is contained in the Consultation Summary Report published alongside this strategy. Key themes across the responses received included:

- There were more respondents who did not own an electric vehicle compared to those who did. Those who owned an electric vehicle were more likely to support the strategy compared to those who do not own an electric vehicle, although there was a high level of support across both groups of respondents.
- The ability to charge an electric vehicle at home or away from home were the two most important factors to those considering whether to buy an electric vehicle
- The majority of respondents did not consider Cheshire West and Chester's existing electric vehicle charging infrastructure to be sufficient to meet existing demand
- The majority of respondents supported the aims of the strategy, with the policy on electric vehicle charging infrastructure in new development sites being the policy most respondents agreed with
- Just over half of respondents considered that the Electric Vehicle Charging Infrastructure Strategy will have very positive/fairly positive impact upon them.

There were also many comments submitted about electric vehicle charging more generally, including the need for rapid charging points and accessible charging points. Full details are included in the Consultation Feedback Report published alongside this Strategy. Feedback from this consultation has informed the final version of this strategy.

2. Aims and objectives: What we want to achieve

Our aim

This strategy sets out the actions the Council will take to develop a sustainable electric vehicle charging infrastructure network that supports journeys across the borough, is easy to use, intuitive and integrated, is inclusive and accessible for all, and offers good value for money, both for the Council and network users. This network will form part of a broader 'net zero' transport network which supports the Council's decarbonisation and air quality objectives, delivering healthier communities while supporting inclusive economic growth. Our approach recognises that this requires significant reductions in reliance on private cars alongside the move to electric vehicles in order to be successful.

Strategy objectives

Based on a robust understanding of the relevant policy framework and thorough data-led forecasts of charging infrastructure demand across the borough, this Strategy identifies:

- A framework approach to managing electric vehicle charging in Council car parks, and to ensuring that residents without access to private off-road parking can access appropriate electric vehicle charging infrastructure.
- A series of strategic priorities to further support the provision of electric vehicle charging infrastructure across the borough, including how we will influence and leverage investment from the private sector and other partners. This includes how we will ensure quality provision of charging infrastructure in new development sites.
- How we will promote public electric vehicle charging infrastructure and promote uptake of electric vehicles
- An implementation plan, detailing initial assessment of the feasibility of installing charging infrastructure in key council car parks and identification of likely focus areas for on-street residential charging.

2.1. Scope

This strategy covers the administrative area of Cheshire West and Chester Council. It focuses on electric vehicle charging for cars, car-based vans, and taxis for four user groups with differing needs for electric vehicle charging:

- Cheshire West and Chester residents
- Local businesses, their employees, taxis, van-based logistics operations and car clubs
- Council fleet vehicles
- Visitors to Cheshire West and Chester

The strategy does not cover electric vehicle charging infrastructure for buses or large goods and service vehicles (other than council fleet), where responsibility for charging infrastructure sits wholly outside the council's remit. Similarly, charging for e-bikes, electric motorbikes and micro-mobility solutions are not included at this point.

In this strategy, we use the term 'electric vehicle' to refer to all 'plug-in' vehicles, but excluding hybrid vehicles without a plug. For further details, see Section 2.1 of the supporting Policy Databook published alongside this strategy.

3. Our strategic priorities

3.1. Delivering a low-carbon transport system

The Council is keen to support a transition to electric vehicles because it delivers on our broader corporate objectives. Increasing the uptake of electric vehicles is a core part of the approach to transport decarbonisation set out in our Climate Emergency Response Plan, and to achieving the clean air objectives set out in our Low Emission Strategy. As such, it is critical that our approach to supporting network development aligns with our wider plans for delivering a holistic, inclusive and net zero transport system for the borough. In line with the transport decarbonisation hierarchy set out in section 1.1 above, this includes ensuring that our approach prioritises reducing travel demand and shifting trips to walking cycling and public transport wherever possible.

Further details of how we will deliver this will be set out in the forthcoming revision of Cheshire West and Chester's Local Transport Plan (Local Transport Plan 4).

Policy 1:	Electric vehicle charging infrastructure as part of a holistic, inclusive, low carbon transport system
The Council will seek to support the roll-out of electric vehicle charging infrastructure as part of the development of a holistic, inclusive, low carbon transport system, using an "Avoid, Shift, Improve" hierarchy. The roll-out of electric vehicle infrastructure should support wider measures that reduce demand for travel and shift trips to walking, cycling and public transport.	

3.2. Social inclusion

As well as its Climate Emergency Declaration, the Council declared a Poverty Emergency in 2020, providing a framework for a fairer, greener recovery following the Covid-19 pandemic⁸. There are significant communities of deprivation across the borough, with over 24,000 residents living in neighbourhoods that rank in the 10% most-deprived in England. Highest levels of deprivation are concentrated within urban areas, although dispersed rural poverty is also a challenge. Ellesmere Port has also been identified as an area with regionally significant levels of transport-related social exclusion risk⁹.

As an emerging technology with significant constraints on market supply, electric vehicles currently cost significantly more than petrol or diesel vehicles to purchase, and the second-hand market is still emerging. As such, there is currently an established link between income levels and the uptake of electric vehicles. Price parity is not expected to be reached until the mid-to-late 2020s and is reliant on the falling price of batteries and an increasing supply of electric vehicles. As such, it is expected that the correlation between areas of affluence and early mass adoption of electric vehicles will continue into the medium term. While the Council is limited in the action it can take to support low-income households with the purchase of electric vehicles, there are things we can do to ensure

⁸ [The Poverty Emergency | Cheshire West and Chester Council](#)

⁹ [Social Inclusion | Transport for the North - Transport for the North](#)

equitable access to electric vehicle charging infrastructure.

In addition, it is important to ensure that the emerging charging network is fairly distributed across the borough. Charging typically takes place either at home, or at key destinations. The highest density of housing (particularly housing without access to private off-street parking) and destinations (workplaces, shops, community facilities etc.) tend to be clustered within urban areas. However, it is important that rural areas are not left behind, particularly as these areas are often also poorly served by sustainable modes of travel.

Policy 2:	Socially inclusive electric vehicle charging infrastructure
<p>The Council will seek to ensure that the roll-out of the electric vehicle charging network ensures that no community is left behind. This includes:</p> <ul style="list-style-type: none">• Ensuring that the transition to electric vehicles does not ‘lock in’ car dependency by coming at the expense of promoting travel reduction, active transport and public transport.• Ensuring that investment in charging infrastructure is appropriately balanced between urban and rural areas, in line with emerging demand.• Promoting the use of electric car clubs, which can offer a more affordable alternative to private vehicle ownership for occasional car users.• Ensuring that charging infrastructure meets latest national accessibility standards, particularly working towards compliance with BSI PAS 1889:2022.	

3.3. Public charging infrastructure

Public charging in local authority car parks

The Council has direct control of off-road car parks located across the borough, in addition to other parking facilities on-street and at leisure and community centres.

Charging in public car parks can be a valuable resource for destination charging and can also have great value for local residents without access to a private driveway or garage where they can charge their vehicle from their home power supply. Car-park based charging hubs can also be beneficial for car club schemes, particularly in urban areas.

The Council also controls park & ride sites surrounding Chester, aimed at reducing the number of car trips into the city centre. We will examine the case for installation of appropriate electric vehicle charging infrastructure at these sites where it would complement the function of the park & ride service.

Charging at home for those without off-road parking

The vast majority of electric vehicle charging activity takes place at home. However, we know that many households in the borough do not have access to private off-road parking and may therefore have difficulty charging their vehicle at home. Responses to the consultation on this strategy and national research indicate this is the most significant barrier to electric vehicle uptake for many households.

Without support, some drivers may attempt their own fixes. Nationally, we have already

seen examples of electric vehicle drivers trailing cables across the public footway to charge vehicles from their homes. This can present a trip hazard (even with a covering mat), is detrimental to inclusive mobility, and may contravene the Highways Act 1980. The Council therefore does not permit this form of electric vehicle charging. The installation of electric vehicle chargers on the public highway, if not carefully managed, may also generate street clutter and create negative impacts for road users, particularly pedestrians and those with disabilities, potentially compromising the Council’s commitment to inclusive mobility and active travel modes.

Providing safe alternative access to safe and accessible public electric vehicle charging for people who must park their car on the street is therefore critical to the UK’s transition to electric vehicles, and the protection of inclusive mobility for road users with additional needs. The Council has developed a hierarchy of charging infrastructure options to help meet this need, based on a thorough assessment of options summarised in Section 6 of the Policy Databook published alongside this strategy. The Council’s approach is set out in Figure 5.

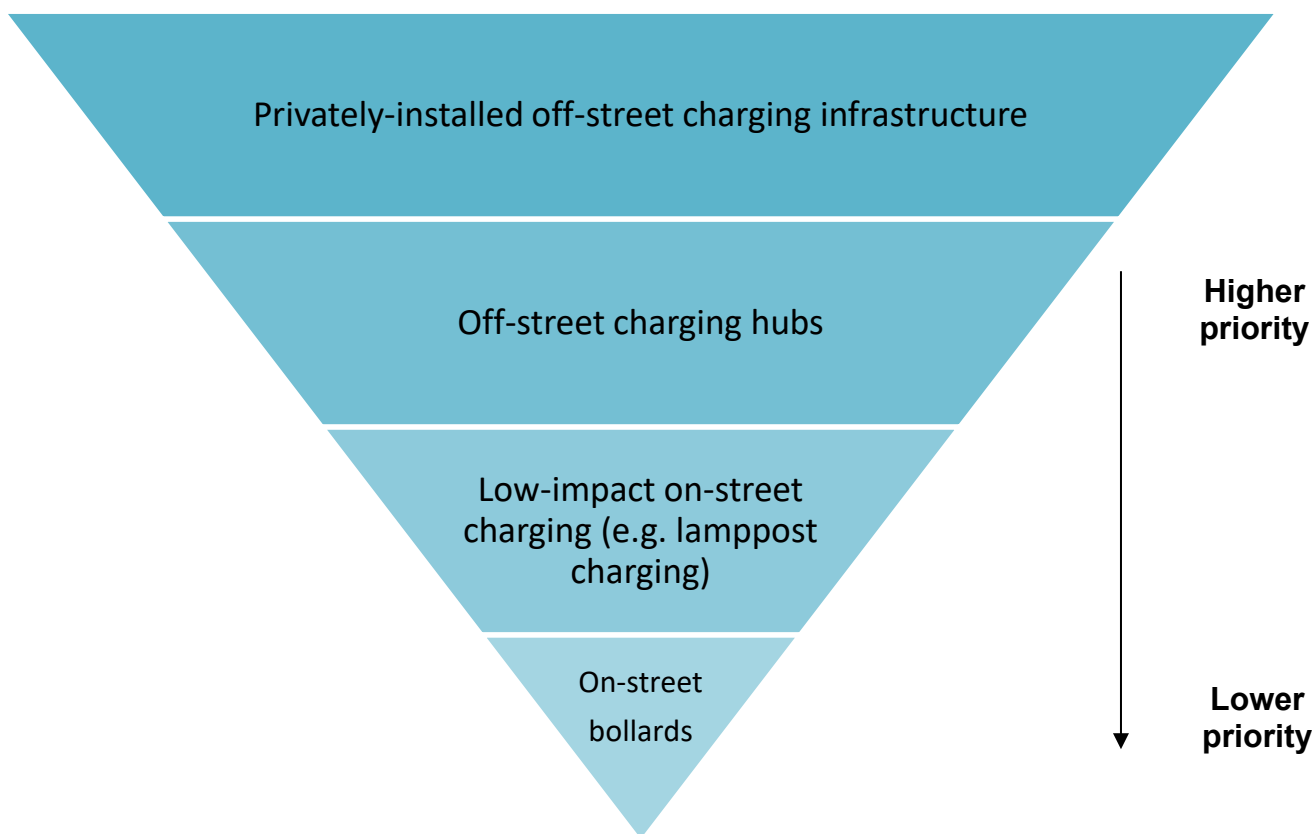


Figure 5 - Priorities for supporting charging without off-street parking

Where possible, the Council will seek to avoid the need for on-street charging infrastructure by creating off-road fast charging hubs within a close walking distance of residential areas with low levels of private off-street parking (e.g., driveways). When planning new developments, guidance from the Chartered Institution of Highways and

Transportation (CIHT)¹⁰ defines a reasonable maximum walking distance to a bus stop as approximately 400 metres. In the absence of detailed research on walking distances to electric vehicle charging infrastructure hubs, this is the definition adopted here. This is broadly equivalent to a 5-minute walking distance.

Where off-street charging hubs are not possible, or a 400m walk is impractical due to blue badge holder status, we will prioritise use of low-impact measures, such as lamp-post chargers where these are deliverable and do not pose a trip hazard. Finally, on-street charging bollards targeted at home charging use will only be accepted where it has been shown that the alternative options are not deliverable. These will generally be standard or fast chargers only, reflecting that these facilities are intended for overnight charging, rather than attracting on route or destination charging on residential roads. Section 4.7 of the attached Policy Databook sets out mapping of areas where residual demand for on-street charging facilities is likely to be highest, in line with the boroughwide map below.

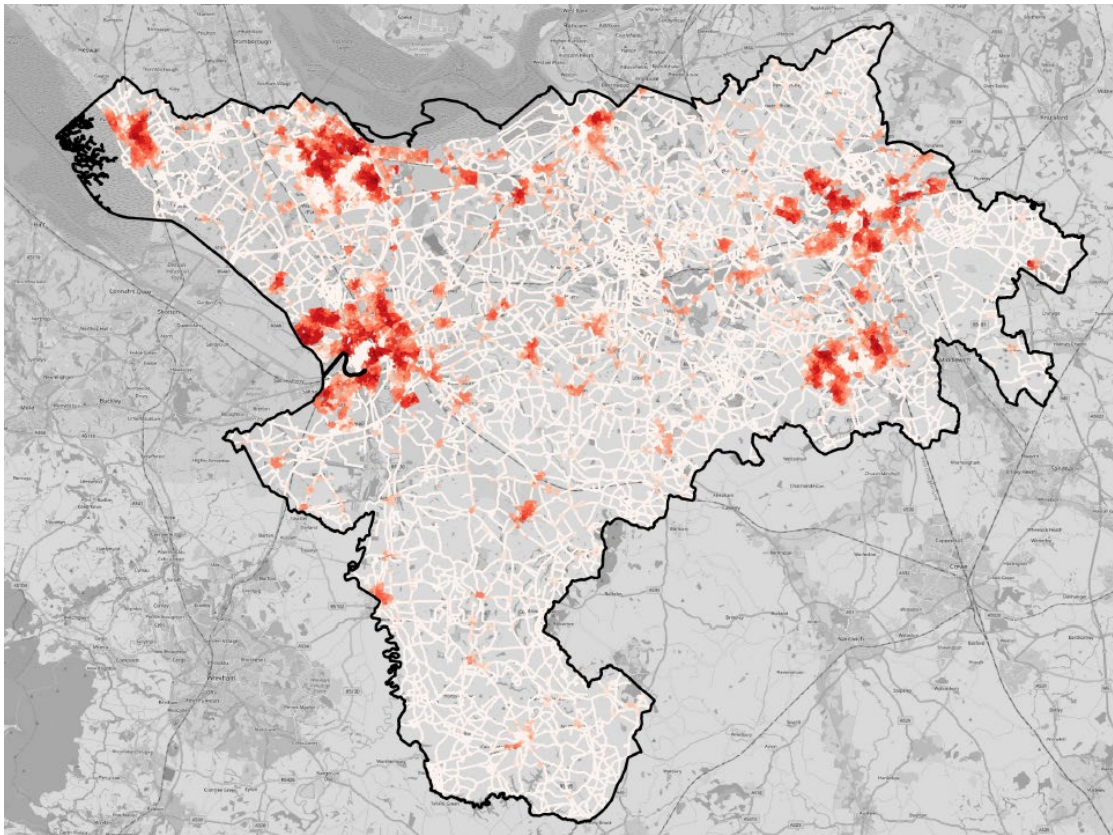


Figure 6: Demand for on-street charging outside charging hub access distance.

The potential to provide safe access to charge an electric vehicle with a home charger using a cable gully or channel is currently being piloted in various locations across the UK. This has the potential to become an alternative low-impact on-street charging option, deliverable at mass scale, simply and cost-effectively, in a similar way to dropped kerbs. The Council will keep this under review and consider whether such solutions would be suitable in a future revision of this strategy.

This priority matrix applies primarily to the provision of domestic charging solutions for

¹⁰ 'Buses in Urban Developments' (2018). See [Streets And Transport In the Urban Environment | CIHT](#)

properties without off-street charging. In the right location, on-street charging may have alternative use-cases, such as rapid charging focused on taxi vehicles, which need to be carefully considered prior to commissioning and installation.

It is also important to note that most electric vehicle drivers will not need to charge their vehicles every night, just as few petrol and diesel car drivers need to top up every day. The national electric vehicle charging infrastructure strategy states that “for many people, charging will not be needed more than once a week”¹¹

Installation of a public charging network takes significant coordination and planning, as well as financing, procurement, and delivery arrangements. Certain provisions may not be suitable in specific locations or may require costly enhancements to the energy grid. The Council will therefore not be able to deliver this infrastructure ‘on demand’ in response to individual requests, at least in the short term. Where ‘on demand’ systems have been trialled in the past, electric vehicle charging infrastructure installations have proved difficult due to lengthy TROs, opposition from neighbours, DNO supply times and site selection issues. However, we will establish a web-based system to record any requests received and will use this to identify areas of high demand across the borough. This will help to inform future delivery programmes and funding bids

Policy 3:	Council-led delivery of electric vehicle charging infrastructure
<p>The Council will seek to enable and encourage deployment of an inclusive public charging infrastructure network suitable to meet predicted demand in line with national targets. Where we procure the installation of new infrastructure, we will prioritise:</p> <ul style="list-style-type: none"> • Fast chargers at key destinations such as town centres, leisure centres and other key amenities, to serve destination charging and e-car clubs. • Standard chargers in residential areas with limited off-street car parking, to cater for areas of high forecast overnight charging demand. • Rapid and ultra-rapid chargers in selective town centre locations, primarily designed to serve electric taxis, fleet vehicles and e-car clubs. • Investigation of the viability of installing appropriate charging infrastructure at Chester Park & Ride sites. <p>We will seek to meet or exceed regional levels of public electric vehicle charging infrastructure per 100,000 population by 2025 and meet or exceed the same metric nationally by 2030.</p> <p>The Council will seek external funding to ensure development of a self-sustaining electric vehicle charging network which does not rely on continuing public finance support in the future and minimises the impact on existing and future Council budgets.</p> <p>Procured electric vehicle charging infrastructure should be capable of using the Open Charge Point Protocol (v.1.6 or above), which is promoted as the best way to provide the widely available and accessible recharging networks of the future. This would</p>	

¹¹ [UK electric vehicle infrastructure strategy - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

improve functionality, reduce maintenance costs, and also allow an easier transfer of assets into any new operators if a change of supplier is required in the future.

Policy 4:

Home charging for properties without off-road parking

Recognising that a lack of off-road parking is a significant barrier to electric vehicle adoption, the Council will promote a hierarchy of solutions to electric vehicle charging for residents, businesses, and shared vehicles without access to off-road parking, which prioritises off-street charging hubs within a 400-metre walking distance (approx. 5-minute walk), followed by other low-impact solutions which avoid generating additional street clutter and maintenance/ management challenges.

The Council will continue to develop our customer service process for the management and recording of requests for residential electric vehicle charging infrastructure to inform future deployment of charging hubs and on-street solutions.

3.4. Council fleet and workplaces

Fleet and workplace charging at council sites

Sites owned by the Council were analysed as part of a desktop review and mapped alongside existing charge points in the area (see Figure 7).

In addition to public charging, there is potential to provide charging infrastructure at Council offices to encourage employee transition to electric vehicles. Some sites owned by the Council may also be suitable for on-route charging provision for Council fleet vehicles. There may be options to facilitate public electric vehicle charging overnight at Council car parks where appropriate.

The Council is undertaking a full Fleet Review to support the Council's target of making its own activities net zero by 2030. This must be done in a careful and considered way, ensuring that the Council continues to have the right vehicles for the right jobs. This will include an innovative programme of electric vehicle charging infrastructure in Council depots, car parks and on-street to enable the greening of the fleet.

We will explore opportunities to maximise public charging infrastructure by making fleet charging infrastructure available for public use where safe and practical to do so.

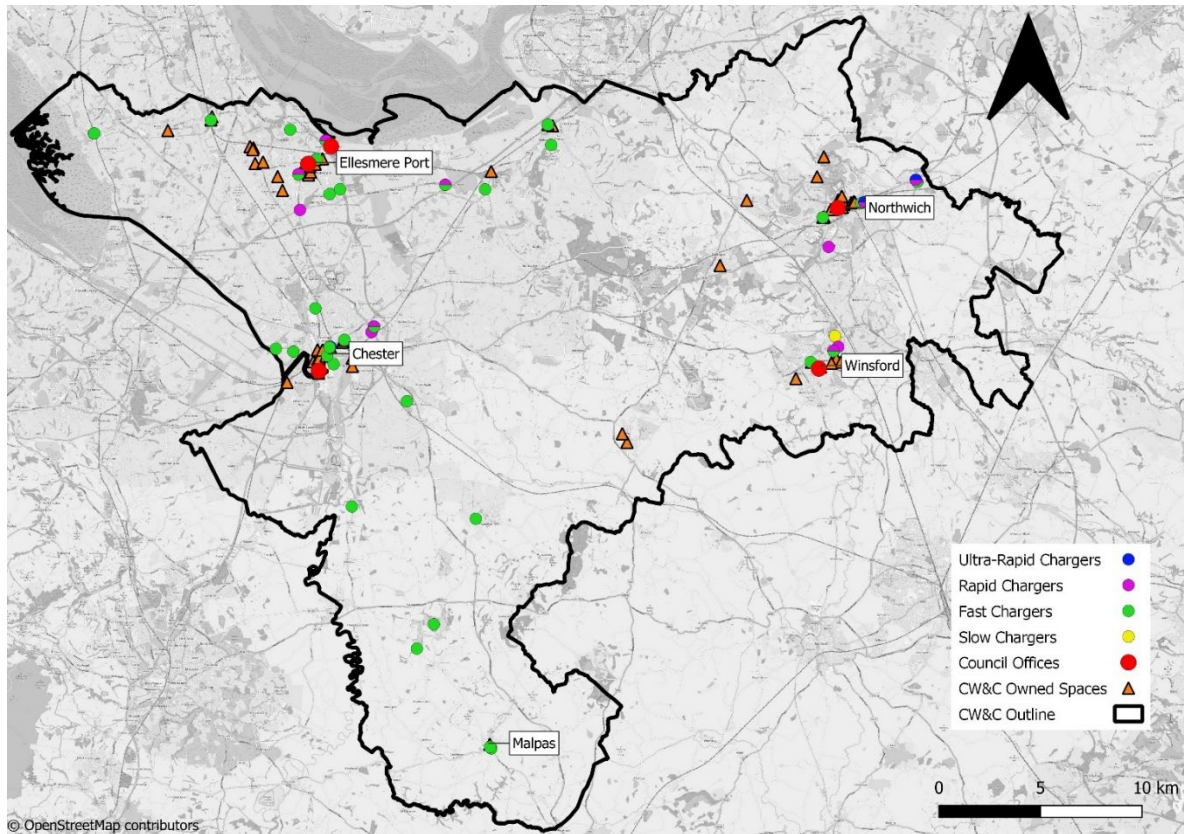


Figure 7: Council Owned Sites (Orange) and Offices (Red)

Policy 5:	Electric vehicle charging infrastructure for staff, partners, and fleet
<p>The Council will support staff and visitor access to electric vehicle charging at Council premises. We will develop staff electric vehicle charging policies to set out how staff and fleet electric vehicle charging infrastructure should be used.</p> <p>Where technology allows, the Council will seek to transition its fleet to ultra-low emission vehicles, in line with our target to achieve net zero carbon operations by 2030. To achieve this, we will progress a systematic Fleet Review to inform the electrification of the Council’s own vehicles, including exploring innovative options to support electric vehicle charging at depot sites. We will explore opportunities to combine procurement, installation and operation of fleet, workplace and public charge point infrastructure where this is practical, safe and feasible.</p>	

3.5. Charging infrastructure in the Planning process

Through the planning system, the Council can use its direct influence on developments to improve provision of electric vehicle charging via strategic infrastructure and transport planning, local plans, guidance, and development conditions.

Local planning policies in England are guided by the National Planning Policy Framework

(NPPF)¹², which plays an important role in future proofing new developments. The planning system should help to shape places in ways that contribute to radical reductions in greenhouse gas emissions, and infrastructure to mitigate climate impacts and support renewable and low carbon energy and infrastructure. Paragraph 107 states that:

“If setting local parking standards for residential and non-residential development, policies should take into account: a) the accessibility of the development; b) the type, mix and use of development; c) the availability of and opportunities for public transport; d) local car ownership levels; and e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra- low emission vehicles.”

Moreover, paragraph 112.e states that applications for development should “be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations”

Following a consultation in Summer 2019, the government has made changes to the English Building, setting a new national minimum acceptable standard for new developments¹³. A summary of the requirements is set out in Figure 8 below. These standards are subject to various caps and conditions, and the below is provided for illustrative purposes only.

	Requirements
New residential buildings or change of use	1 electric vehicle charge point per dwelling, capped by total number of parking spaces. Any additional parking spaces should include cable routes for future additional charge points
Major Renovations to residential buildings	1 electric vehicle charge point per 10 parking spaces, and cable routes for all additional parking spaces
New non-residential buildings and major renovations to non-residential buildings	1 electric vehicle charge point per 10 parking spaces, and cable routes for at least a fifth of the total number of remaining parking spaces
All	All charge points must be capable of providing a reasonable power output (7kw) for each parking space for which it is intended to be used, must run on a dedicated circuit and must be compatible with all vehicles which might require access to it.

Figure 8: National Requirements for electric vehicle charging infrastructure in developments and renovation

The Approved Document took effect on 15th June 2022 and applies to any applications submitted since that date, or before if work starts on site before 15th June 2023. The Council’s Parking Standards commit to implementing the requirements set out in Approved Document S from 15th June 2023.

¹² [National Planning Policy Framework - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/national-planning-policy-framework-guidance)

¹³ [Infrastructure for charging electric vehicles: Approved Document S - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/infrastructure-for-charging-electric-vehicles-approved-document-s)

Policy 6:	Electric vehicle charging infrastructure in new developments
<p>All relevant developments and renovations must deliver electric vehicle charging All relevant developments and renovations must deliver electric vehicle charging infrastructure which meets at least national minimum Building Regulations standards from June 2023, as set out in “Approved Document S” (Infrastructure for charging electric vehicles: Approved Document S - GOV.UK (www.gov.uk)).</p> <p>We will explore the case for a future update of the Council’s Parking Standards and broader development management guidance to align with national requirements and better reflect the Council’s strategic approach to transport in new developments.</p> <p>For the avoidance of doubt, these requirements will apply equally to developments where the Council and its partners are acting as site promotor or developer.</p> <p>The provision of electric vehicle charging infrastructure will not be a valid justification for additional parking spaces within a new development than would otherwise be included.</p>	

3.6. Taxis: Hackney carriages and private hire vehicles

From 2025, all newly licensed hackney carriages and private hire vehicles licenced by the Council must be ultra-low emission vehicles. Across the borough, electric vehicles are already starting to enter the Hackney Carriage and Private Hire Vehicle fleet.

The usage patterns of both forms of taxi mean that access to rapid and ultra-rapid charging are important in allowing drivers to maximise their productive work time. Public electric vehicle charging infrastructure at company premises, and close to popular routes or ranks, can be beneficial to supporting the electric vehicle taxi trade.

While it is not within the scope of this strategy to define specific locations for charging for electric taxis, the strategy aims to ensure that public electric vehicle charging is available to all user types, including taxis. Vehicles are usually charged at home or at a depot overnight but may need rapid charging provision to top up between trips during the day.

It should be noted that taxi ranks themselves are not appropriate locations for electric vehicle taxi charging, due to being located in areas of particularly high pedestrian footfall and the need for vehicles to continually move up the queue based on demand.

Policy 7:	Electric ‘taxis’
<p>The Council will use its licensing powers to mandate a transition to ultra-low emission vehicles. From January 2025, all new applications for hackney carriages and private hire vehicles must be ultra-low emission vehicles. For full details, see the Council’s Licensing Policy: Statement of licensing policy Cheshire West and Chester Council. We will use our roll-out of public charging infrastructure to support the taxi trade where practical and relevant.</p>	

3.7. Supporting our partners

Potential commercial sites

It is important to ensure that the roll-out of the public electric vehicle charging infrastructure network offers good value for money, both for users and for the Council itself. This includes ensuring that any investment in electric vehicle charging infrastructure does not duplicate known investment plans from the private sector or other partners.

Figure 9 illustrates the analysis and mapping of potential commercial sites in the borough, alongside existing charge points. These sites include:

- BP and Shell forecourts with both companies committing to installing charge points.
- Supermarkets, who are increasingly working with charge point operators and private car manufacturers to bring forward electric vehicle charging.

There are generally more potential commercial sites located to the north of the borough, concentrated in and around Chester, Ellesmere Port, Northwich and Winsford. Commercial sites in dense urban areas are likely to support destination charging. Users are likely to stay at these sites for enough time to sufficiently charge their vehicle, supporting the case for implementing charging infrastructure at commercial sites.

Outside of the main urban areas, there are fewer potential commercial sites in smaller towns such as Helsby, Frodsham and Tarvin. There are no potential commercial sites located south of Chester and Winsford, apart from Farndon. These areas may need to be a focus for public sector intervention, although they also demonstrate lower forecast electric vehicle uptake in the short-term.

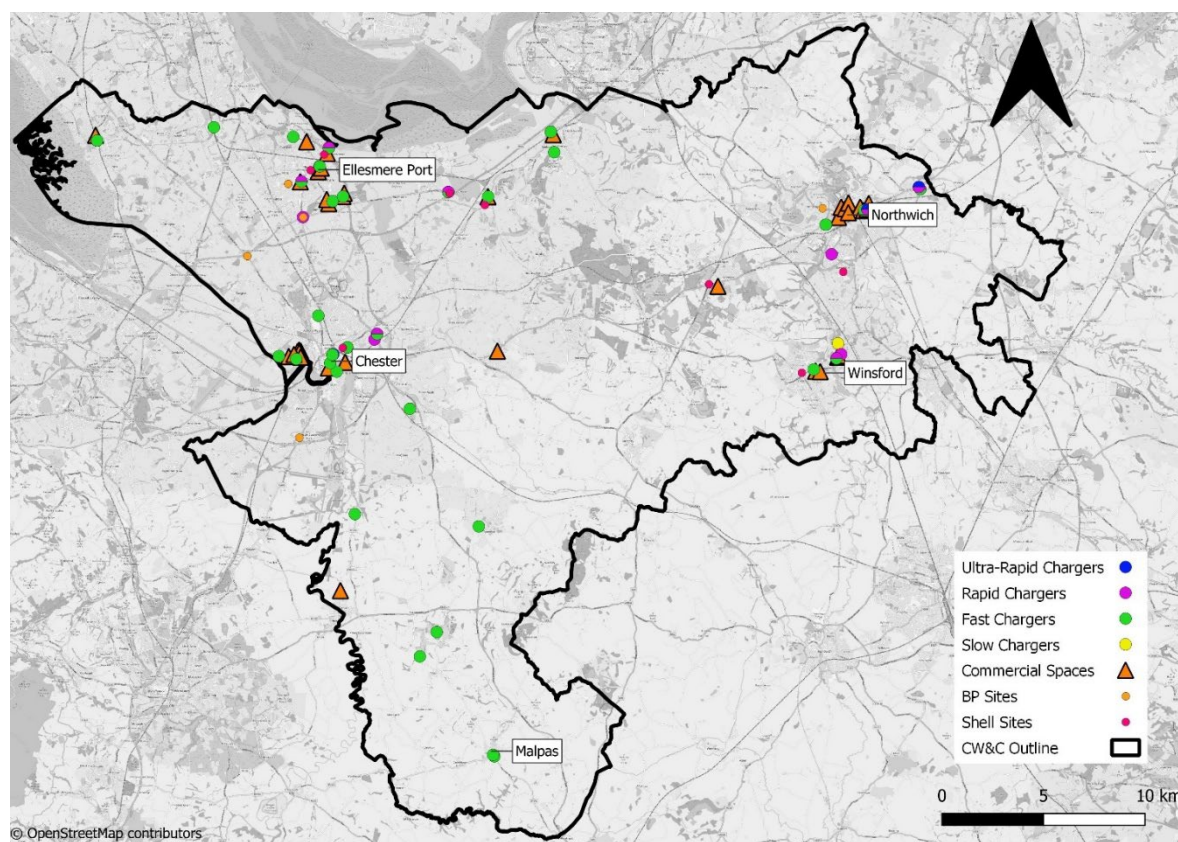


Figure 9: Potential Commercial Sites

Public car parking at large retailers, supermarkets, shopping centres and transport hubs such as railway stations present an opportunity to provide electric vehicle charging for users of these amenities. Like local authority car parks, these also have the potential to support with charging for those unable to charge vehicles at home.

NHS hospitals

There is already a significant programme of investment planned to decarbonise the National Health Service, including transitioning their fleet to electric vehicles. Visitors and staff are likely to dwell at hospitals for enough time to warrant the investment and implementation of infrastructure in hospital car parks. Additionally, charging hubs at hospitals could also support wider demands for electric vehicle charging in appropriate locations.

NHS hospitals in Cheshire West and Chester borough were identified as part of a desktop review and plotted alongside existing charge points in Figure 10 below. This shows that there are four hospitals in total across the borough; located in Chester, Ellesmere Port, Northwich and Tarporley (War Memorial Hospital).

We will work with NHS colleagues to support their roll-out of charging infrastructure.

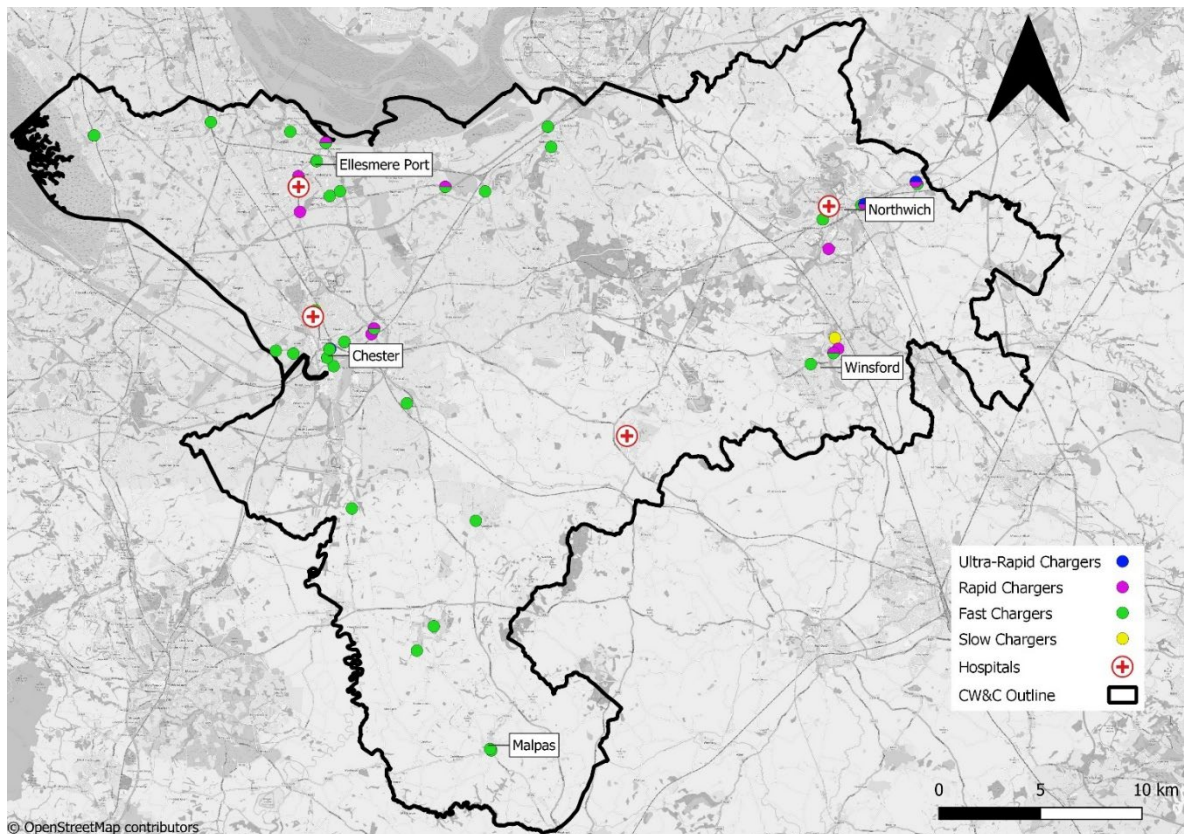


Figure 10: NHS Hospital Sites

Workplace & business charging

Workplace electric vehicle charging infrastructure can enable businesses to switch their fleets to electric vehicles and make it easier for commuters to make the switch too, even acting as an alternative to residential charging in some instances.

The Government’s Workplace Charging Scheme provides a grant to support charging infrastructure at workplaces of 75% of the purchase and installation costs of a charger capped at a maximum of £350 per socket (a maximum of 40 sockets per organisation), which hundreds of companies across the UK have used to install electric vehicle chargers for their employees and fleets. The government has also legislated so that no benefit in kind liability arises for employees who charge their own electric vehicles at work.¹⁴

Rapid charging on the strategic road network

The UK has one of the largest, and most comprehensive rapid charging networks in Europe. However, Transport for the North estimate that between 12,000 and 26,000 rapid public chargepoints will be needed along the strategic and major road networks across the north of England by 2025 to meet longer-distance, on-route charging requirements.

The number of rapid and ultra-rapid charge points on the network has already grown rapidly, with the number of ultra-rapid chargers increasing 40% nationally between in the first half of 2022.¹⁵

National Highways are the responsible authority for managing the deployment of rapid electric vehicle charging at sites on the strategic road network, including the M53, M56, M6, A494, A55, and A550. There are currently only four public rapid or ultra-rapid chargers at sites on or close to the strategic road network in the borough.

Supporting local town and parish councils

The Council is also aware of several local town and parish councils who are interested in installing public electric vehicle charging infrastructure on their land. These sites may be particularly beneficial in providing a convenient location for electric vehicle charging infrastructure hubs in smaller settlements and rural areas. Through our approach to procurement, we will seek to provide these partners with an easy route to fund and deliver chargepoint installations, in partnership with the Council.

Policy 8:	Using the Council’s broader influence
<p>The Council will seek opportunities to encourage organisations, businesses and other owners of commercial public and customer car parks (including local town/parish councils) to deploy public electric vehicle charging infrastructure where appropriate, outside the development management process. This includes working with Council-owned companies such as Brio to manage electric vehicle charging infrastructure roll-out on their sites. These sites also have the potential to provide benefits for local residents at times of low commercial demand, such as overnight charging.</p> <p>The Council will promote and support efforts to improve the availability of rapid and ultra-rapid electric vehicle charging on and near the strategic and major road networks, where appropriate and in line with local and national planning policy.</p>	

¹⁴ [Workplace Charging Scheme: guidance for applicants - GOV.UK \(www.gov.uk\)](https://www.gov.uk/workplace-charging-scheme)

¹⁵ [Revealed: Ultra-rapid charging grew 40% in the first half of 2022 - Zapmap \(zap-map.com\)](https://zap-map.com/news/ultra-rapid-charging-grew-40-in-the-first-half-of-2022)

3.8. Wider public information and promotions

Given that electric vehicles have not yet reached mass adoption stage, a broader challenge beyond public charging infrastructure is the level of information and general understanding that the general public have regarding electric vehicles. Research commissioned by the Department for Transport highlights a perception that electric vehicles do not fit well with existing parking and driving habits, but that these views are often exacerbated by low awareness, poor knowledge and some misconceptions about electric vehicle charging, costs and range.¹⁶ The Council recognises that we can contribute towards information provision to help overcome this.

Increasing knowledge, understanding and experience of electric vehicles can help break down the barriers to uptake, challenge perceptions, and give people the encouragement and reassurance they need to make the shift to a cleaner vehicle. Awareness of available electric vehicle charging infrastructure is also a factor in driving electric vehicle adoption. The Council has opportunities to use its existing online presence to signpost current and potential electric vehicle drivers toward existing sources of information on chargepoints, and to use resources from our projects to promote electric vehicles and a cleaner transport choice.

A good example of challenging common misconceptions about electric vehicles can be found on the Office for Zero Emission Vehicles website¹⁷.

We can also maximise the availability of public electric vehicle charging infrastructure by promoting private chargepoint sharing schemes, such as CoCharger¹⁸. This offers an opportunity to extend the use of private infrastructure, as well as offering an income stream for residents who offer the service. While this is no replacement for the permanence and security of public charging infrastructure, it offers a valuable opportunity to increase charging availability, particularly in the short term.

Policy 9:	Wider public information and promotions
The Council will use our existing online presence to signpost information to dispel myths about electric vehicles and promote the potential benefits of electric vehicle transition as part of a wider sustainable mobility framework.	
The Council will promote private electric vehicle charging infrastructure sharing schemes to maximise charging availability across the borough.	

3.9. Procurement

Electric vehicle charging infrastructure is a developing market, and business models for successful operation of charging networks are evolving rapidly. Installing and operating electric vehicle charging infrastructure requires both upfront capital (for the chargers themselves and connection to the energy network), and ongoing revenue funding (for

¹⁶ [Public Electric Vehicle Charging Infrastructure. Deliberative and quantitative research with drivers without access to off-street parking. Research report. \(publishing.service.gov.uk\)](#)

¹⁷ [Common misconceptions about electric vehicles \(accessible web version\) - GOV.UK \(www.gov.uk\)](#)

¹⁸ [Co Charger - Co Charger: Neighbourhood electric vehicle charger sharing made easy \(co-charger.com\)](#)

operation, inspection and maintenance of the network). Section 7 of the Policy Databook contains further detail on some of the commercial models available to local authorities looking to deliver or expand their area’s electric vehicle charging infrastructure network.

Analysis conducted as part of the development of this strategy suggests that the electric vehicle charging infrastructure has limited potential to offer significant financial returns for the Council, at least prior to 2030, largely due to the gradual uptake of electric vehicles.

The Council expects to pursue a partnership/ concession model, whereby the council ‘hosts’ chargers operated and managed by an operator at little or no cost to the local authority. Revenue from charging is largely retained by the operator, with a portion shared with the host (either via profit/revenue share or a hosting fee). The larger scale of the networks operated by commercial businesses allow them to benefit from savings in operating costs which are not readily accessible to Councils running smaller networks in-house. This model has been successfully used by authorities around the country.

The Council has commenced a process of market engagement to identify our preferred terms and opportunities for procurement of electric vehicle charging infrastructure. We are conscious of the long-term need to provide both public infrastructure, charging at our depots and workplaces, and charging infrastructure for our partners (including local councils, NHS and business partners).

Policy 10:	Procurement
<p>The Council will undertake systematic market engagement to determine the best methodology for procurement of one or more supply partners, with a view of adopting a holistic ‘strategic sourcing’ approach to provision of a full array of electric vehicle charging infrastructure types across the borough – including public, fleet and workplace charging. We will investigate the potential of opening this opportunity up to partner organisations, including town/parish councils, local NHS bodies and business partners.</p>	

3.10. Chargepoint monitoring

As uptake of electric vehicles grows over time, we will continue to monitor the usage of Council-owned charge points, as well as tariffs, to help us to identify sites of particularly high demand where additional charging infrastructure may be required. This will help to mitigate risks associated with drivers queuing to charge their vehicles, such as inconsiderate parking within car parks or in nearby areas.

Policy 11:	Monitoring
<p>The Council will establish and undertake a systematic process of monitoring utilisation rates and tariffs across electric vehicle charging infrastructure within the borough, including liaison with the commercial sector, to explore potential for increased coordination and determine the optimum time to bring forward further electric vehicle charging infrastructure. As electric vehicle uptake increases, monitoring usage will also allow us to provide additional chargepoints at or near sites of particularly high demand to reduce risks associated with drivers queuing to charge their vehicles.</p>	

3.11. Managing energy impacts

Electric vehicle charging relies on energy supply through connection to networks or lighting circuits, generating challenges in connecting electric vehicle chargers and providing sufficient power to operate.

Rapid charging hubs and ultra-rapid charging take huge amounts of energy at busy times, which can lead to expensive upgrading of the local electrical grid, including new substations or transformers. Due to their nature of delivering large amounts of energy very quickly, there is limited opportunity to manage the delivery of energy across off-peak hours to protect the grid. Even standard/ fast charger installations can require upgrades or reinforcement of networks in areas where the local network can only support small increases. The cost of these works can be prohibitive. Without mitigation, the transition to electric vehicles could cost £2.2 billion in UK grid infrastructure by 2050¹⁹.

Smart charging, during off-peak periods and when demand and network congestion is otherwise low, means consumers can potentially benefit from cheaper pricing when charging, avoid triggering future network reinforcement, use their electric vehicles to power their homes or businesses or sell energy back to the grid²⁰. Since 2019, all government funded charger installations must have smart functionality.

In deploying or licensing privately funded electric vehicle charging infrastructure, the Council has opportunities to require chargepoint operators to meet the same standards set by government for smart charging. The Council also has the opportunity to guide developers deploying electric vehicle charging to opt for smart chargers through planning advice and the proposed technical advice note to be developed.

In addition, renewable energy generation and on-site storage offer even greater potential benefits for the transition to net zero transport. Electric vehicles reduce CO₂ and other harmful emissions from the tailpipe, positively benefitting the drive to reduce transport emissions. These environmental benefits can be increased if upstream carbon emissions are also tackled when electric vehicles are charged from renewable sources. Projects across the UK have made use of battery storage, sometimes combined with on-site photovoltaic generation, to support electric vehicle charging. The Council could increase the use of renewables in the electric vehicle charging network, and mitigate against challenges in energy supply, by promoting the installation of on-site renewable generation and storage where electric vehicle chargers are deployed in significant numbers, particularly on new development sites, and in locations that comply with local planning and design policies.

Policy 12:	Smart charging, renewable energy generation and energy storage
The Council will seek to increase the emissions reduction benefits of electric vehicles and mitigate the impact of the charging network on the local and national grid by promoting the use of renewable energy for electric vehicle charging, encourage 'off-peak' use of electric vehicle chargers, and exploring technical options to manage grid	

¹⁹ [My Electric Avenue |](#)

²⁰ [Reducing emissions from road transport: Road to Zero Strategy - GOV.UK \(www.gov.uk\)](#)

demand from electric vehicle charging infrastructure. This will include encouraging, where appropriate, the consideration of on-site renewable generation and storage infrastructure and setting parking policies which encourage the use of electric vehicle charging infrastructure in Council car parks at 'off-peak' times.

Policy 13:	Engagement with the Distribution Network Operator
<p>Noting that the provision of cost-effective power connections will be fundamental to the delivery of charging infrastructure, the Council will continually engage and work in partnership with Scottish Power Energy Networks to address key points of weakness in the power network holding back the delivery of key electric vehicle charging infrastructure programmes promoted by the Council and its strategic partners.</p>	

3.12. Safety and operational considerations

There are several additional considerations that the Council must be mindful of when promoting or commissioning the installation of new electric vehicle charging infrastructure. These include:

- Negligence liabilities – maintenance, trip hazards, duty of care typically sits with the owner of the infrastructure (unless contractually passed to another entity).
- Planning consents – most electric vehicle charging infrastructure does not require planning permission, or are covered by permitted development rights, but it can apply for specific units and any proposals for associated uses or infrastructure, depending on the size, design and location, particularly in heritage, conservation and rural areas.
- Road safety – potential for drivers to be in the road while accessing a charge point, maintaining footway and cycleway widths, obstacles for visually impaired people
- Chargepoint positioning – some vehicles charge at the front, some at the rear and some at the side, and a charge point should be useable by all.
- Management – parking enforcement, signage, Traffic Regulation Orders, reporting faults and complaints, emergencies, inspection process, revenues.
- Disability access – charging bay, charge point, ease of access and use. BSI PAS 1889:2022 Electric Vehicles Accessible Charging contains the latest standards for accessible electric vehicle charging infrastructure design and installation.

The bullet points below set out requirements for new charge point installations as detailed in the national Electric Vehicle Charging Strategy²¹. As well as underlining the points set out above, these requirements emphasise the primacy of planning for active and sustainable modes of transport in the provision of a holistic low carbon transport network:

- Chargepoints should not obstruct pavements or highways or present a safety risk to pedestrians.

²¹ [UK electric vehicle infrastructure strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/612212/uk_electric_vehicle_infrastructure_strategy.pdf)

- Cables will not be allowed to trail across the pavement unless adaptive infrastructure is provided to accommodate them safely (e.g., gullies). Anything that creates a trip hazard does not constitute adaptive infrastructure
- Chargepoints must be incorporated into existing street furniture or parking bays wherever possible. In circumstances where it is not possible, priority must be given to ensuring that access to, and use of, pavements is not impeded and safety of pedestrians is not jeopardised
- Parking spaces for electric vehicle charging will not be added in places where parking spaces are currently not allowed, nor where they could disrupt traffic flow, cyclists or pedestrians
- Chargepoint design and placement should meet accessibility standards and guidance.

Policy 14:	Situating Electric Vehicle Charging Infrastructure
<p>The Council will only support or procure installation of charging infrastructure which:</p> <ul style="list-style-type: none"> • Does not obstruct pavements, cycleways or highways, or present a safety risk to any road users, particularly vulnerable road users. Charging infrastructure should not be located on the pavement. • Does not require trailing cables across the pavement unless adaptive infrastructure is provided, and no trip hazard is created. • Does not disrupt traffic flow, including for cyclists, and do not impede pedestrian movements. • Does not introduce additional car parking where parking spaces are not currently provided or allowed. • Avoids the creation of additional unnecessary street clutter. • Complies with local and national planning policy. • Meets national accessibility standards and guidelines, particularly working towards compliance with BSI PAS 1889:2022 Electric Vehicles Accessible Charging. <p>The planning of all installations will fully consider liabilities, planning consents, road safety implications, positioning, management and accessibility requirements in line with the latest technical standards and national best practice.</p> <p>Wherever appropriate, we will use electric vehicle charging infrastructure installations as an opportunity to collocate multimodal facilities, such as cycle parking and bus stop infrastructure.</p>	

4. Implementation plan

4.1. Delivering electric vehicle charging infrastructure

The following section provides a brief overview of the Council's current thinking in terms of priorities for implementation of this strategy, particularly in relation to public charging infrastructure within council car park sites.

4.1.1. Delivering the strategy

This strategy includes many measures which will require dedicated resourcing, funding and the collaboration of external partners to complete delivery.

While Council budgets are uncertain and under unprecedented constraint, the Council will use our best endeavours to deliver on the aspirational commitments made in this Strategy, using existing project funding, future Government funding opportunities and partnerships with the private sector which deliver an effective and inclusive electric vehicle charging infrastructure network for the borough with minimal impact on existing budgets. All timescales are indicative targets only and will often be dependent on external funding and delivery timelines outside the purview of this strategy.

4.2. How many chargepoints do we need?

Future levels of demand for electric vehicle charging infrastructure are subject to a high degree of uncertainty. The quantity of charging infrastructure needed will vary based on future electric vehicle uptake trends, levels of transition to other sustainable modes, technological developments and emerging consumer charging behaviours. However, analysis carried out in the preparation of this strategy clearly indicates a significant gap between current supply and upcoming demand. The mapping below sets out forecasted uptake of electric vehicles across the borough over time (see Section 4.4 of the supporting Policy Databook for additional future years)

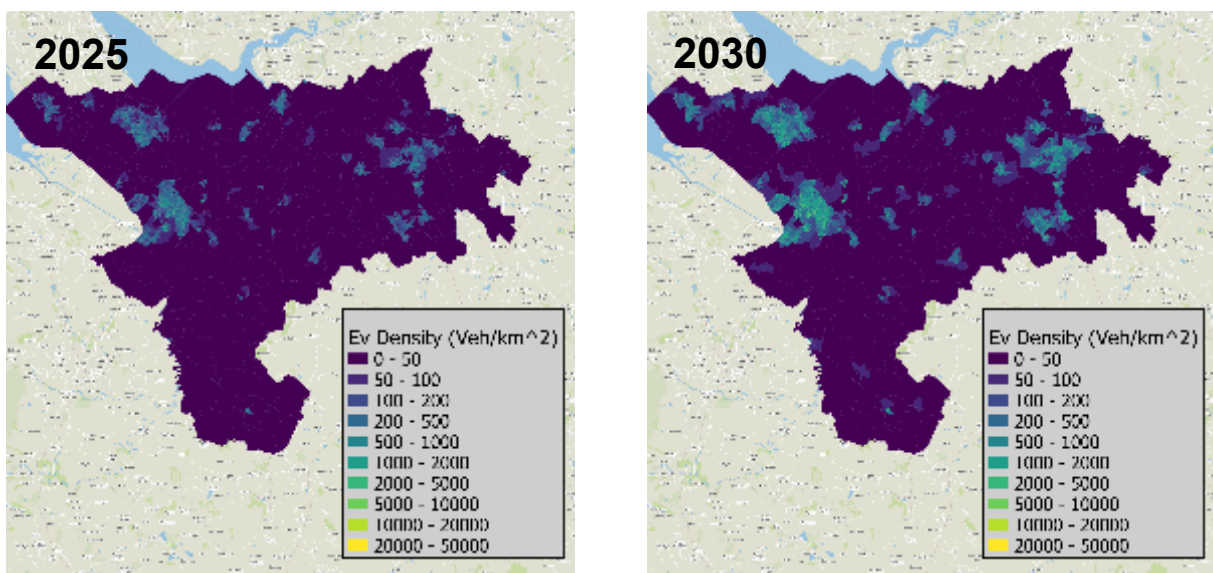


Figure 11: Geospatial uptake of electric vehicles over time

While the vast majority of electric vehicle charging takes place at home overnight, almost all electric vehicle drivers rely on the public network at some point. There is likely to be substantial demand for charging at key destinations, including workplaces, and there is a need to accommodate public ‘home charging’ for households who currently park on-street. There is also a significant role for private charging facilities, such as at workplaces and fleet depots, and the Council can play a key role in leading the way in relation to its own staff and fleet.

Section 4 of the supporting Policy Databook sets out results from several local and national modelling tools detailing forecasts of the number of chargepoints of different speeds/ use cases needed to meet anticipated demand. This suggests demand for over 1,000 public chargers within the next five years within the borough, representing approximately a six-fold increase from current levels of provision.

4.3. Site assessment summary

The table below sets out the assessment of sites which has informed the implementation plan for this Strategy. The criteria and methodology for this assessment is set out in detail in Section 5 of the Policy Databook published alongside this Strategy.

This shows that the higher scoring sites are generally concentrated around the main urban areas of Chester, Ellesmere Port, Winsford and Northwich. This is because these sites are generally located near key attractors and residential areas with limited off-street parking. A couple of sites within the key service centres of Neston and Parkgate and Helsby also score highly due to their proximity to terraced housing/flats as well as retail and leisure facilities.

The higher scoring sites generally have spare capacity within the local electrical supply to accommodate 100 kWh connections, except for Brio Leisure Centre Car Park in Frodsham. Most sites generally score well for place-making conflicts because they are off-street and have sufficient space to accommodate electric vehicle charging points. However, lower scoring sites generally have a large proportion of back-to-back parking spaces that may need to be reconfigured to accommodate electric vehicle charging points.

This prioritisation and ranking of sites is indicative only, and the list of sites is not exhaustive. It presents a starting point for network planning processes but is not a detailed implementation plan. Further assessment is required prior to electric vehicle charging infrastructure procurement and installation.

Site Name	Location	DNO Supply	Residential Potential	Destination Potential	On-Route Potential	EV Uptake	Commercial Conflict	Security	Place-making Conflicts	Total	Rank	Deliverability
Garden Lane Car Park	Chester	3	3	3	3	3	3	3	2	23	1	
Brio Lifestyle	Winsford	3	2	3	3	3	2	3	3	22	2	

Site Name	Location	DNO Supply	Residential Potential	Destination Potential	On-Route Potential	EV Uptake	Commercial Conflict	Security	Place-making Conflicts	Total	Rank	Deliverability
Centre Car Park												
Brio Recreation Centre Car Park	Neston and Parkgate	3	3	3	2	2	3	3	3	22	=2	
Grosvenor Park (on-street)	Chester	3	3	3	3	3	3	2	1	21	4	
Brio Ellesmere Port Sports Village	Ellesmere Port	3	2	3	2	3	2	3	3	21	=4	
Watermans Car Park	Northwich	3	3	3	3	3	1	2	3	21	=4	
Watling Street Car Park	Northwich	3	3	3	3	3	1	3	2	21	=4	
Kingsway Car Park	Winsford	2	3	3	3	3	3	1	3	21	=4	
Brio Leisure Centre Car Park	Frodsham	1	3	3	3	3	3	3	2	21	=4	
Chester Road Car Park	Neston and Parkgate	3	3	3	2	3	2	2	3	21	=4	
Sandiway Library	Cuddington and Sandiway	3	3	3	3	3	2	1	3	21	=4	
Trinity Street Car Park	Chester	3	3	3	3	3	2	2	2	21	=4	
Whitby Park	Ellesmere Port	2	3	3	3	3	2	2	3	21	=4	

Site Name	Location	DNO Supply	Residential Potential	Destination Potential	On-Route Potential	EV Uptake	Commercial Conflict	Security	Place-making Conflicts	Total	Rank	Deliverability
Frodsham Street Car Park	Chester	3	3	3	3	3	1	2	2	20	13	
Shrewsbury Road Car Park	Ellesmere Port	2	3	3	3	3	2	2	2	20	=13	
Victoria Club Car Park	Northwich	3	3	3	3	3	1	2	2	20	=13	
Hadfield Street Car Park	Northwich	3	3	3	3	2	2	1	3	20	=13	
Dene Drive (North) Car Park	Winsford	3	3	3	3	3	1	2	2	20	=13	
Frodsham Station Car Park	Frodsham	2	3	3	3	3	1	2	3	20	=13	
Moor Lane Car Park	Frodsham	3	3	3	3	3	1	2	2	20	=13	
Helsby Library	Helsby	3	3	3	2	3	1	2	3	20	=13	
Helsby Quarry Local Nature Reserve	Helsby	3	2	3	3	3	3	1	2	20	=13	
High Street Car Park	Malpas	3	3	3	2	2	3	2	2	20	=13	
Community Centre Car Park	Tarporley	3	3	3	3	2	2	2	2	20	=13	
Bell Meadow Court Car Park	Tarporley	2	3	3	3	2	3	2	2	20	=13	

Site Name	Location	DNO Supply	Residential Potential	Destination Potential	On-Route Potential	EV Uptake	Commercial Conflict	Security	Place-making Conflicts	Total	Rank	Deliverability
Tarvin Library	Tarvin	3	2	2	3	2	3	2	3	20	=13	
Delamere Street Car Park	Chester	1	3	3	3	3	3	1	2	19	26	
Marina Drive Car Park	Ellesmere Port	3	3	3	3	3	1	2	1	19	=26	
Chester Road Car Park (Little Sutton)	Ellesmere Port	3	3	2	3	3	3	1	1	19	=26	
Wellington Road Car Park	Ellesmere Port	1	3	3	3	2	1	3	3	19	=26	
Woodfield Road North	Ellesmere Port	2	3	3	3	2	2	1	3	19	=26	
Winsford Library	Winsford	3	2	3	3	3	1	2	2	19	=26	
Station Avenue Car Park	Helsby	3	2	3	2	2	2	2	3	19	=26	
Neston Station Car Park	Neston and Parkgate	3	3	3	2	3	1	2	2	19	=26	
Little Budworth Country Park	Tarporley	3	2	3	3	2	3	1	2	19	=26	
Tarporley War Memorial Hospital (Off-Street Car Park)	Tarporley	3	3	3	2	2	3	2	1	19	=26	

Site Name	Location	DNO Supply	Residential Potential	Destination Potential	On-Route Potential	EV Uptake	Commercial Conflict	Security	Place-making Conflicts	Total	Rank	Deliverability
Tattenhall Library	Tattenhall	3	2	3	3	2	3	1	2	19	=26	Orange
Civic Centre Car Park	Ellesmere Port	1	2	3	3	3	1	3	2	18	37	Red
Castle Park House and Gardens	Frodsham	1	2	3	2	3	3	1	3	18	=37	Red
Neston Library	Neston and Parkgate	3	3	3	2	3	2	1	1	18	=37	Orange
Tarporley Library	Tarporley	2	3	3	2	2	2	2	2	18	=37	Green

Figure 12: Rankings for shortlisted sites.

4.4. Indicative implementation plan

Based on the assessment above, we have developed an indicative implementation plan for priority sites. This provides recommendations for installing infrastructure to achieve a base-level electric vehicle charging infrastructure network across the borough. Actual installations will be subject to further site investigation, detailed assessment of electrical capacity, and (depending on procurement route) market interest. As such, other sites assessed above may come forward sooner and the timescales listed below are included as an indication of deliverability only. We hope to be able to accelerate delivery wherever possible, reliant on procurement and funding timescales.

Improvement Requirements	Recommended Sites	Recommended Infrastructure	Use Case	Deliverability Timescales
Provision of <u>rapid</u> chargers to help build a strategic base charging network.	Garden Lane Car Park, Chester	2 x 50kWh rapid chargers	Residential and Destination	2024/25
	Frodsham Street Car Park, Chester	2 x 50kWh rapid chargers	Residential and Destination, complementing fast chargers in adjacent Tesco	2024/25

	Trinity Street Car Park, Chester	2 x 50kWh rapid chargers	Residential and Destination	2024/25
	Watling Street Car Park, Northwich	2 x 50kWh rapid chargers	Residential and Destination	2024/25
	Dene Drive (North) Car Park, Winsford	2 x 50kWh rapid chargers	Residential and On Route (A54 and Council fleet)	2025/26
	Shrewsbury Road Car Park, Ellesmere Port	2 x 50kWh rapid chargers	Residential, supplementing existing fast chargers	2025/26
	Chester Road Car Park, Neston	2 x 50kWh rapid chargers	Residential and Destination and On Route	2025/26
	Moor Lane Car Park, Frodsham	2 x 50kWh rapid chargers	Residential and Destination and On Route	2025/26
	High Street Car Park, Malpas	2 x 50kWh rapid chargers	Residential and Destination and On Route	2025/26
	Community Centre Car Park, Tarporley	2 x 50kWh rapid chargers	Residential, On Route and Fleet	2025/26
	Chester Road Car Park, Little Sutton	2 x 50kWh rapid chargers, plus lighting and parking reconfiguration	Residential	2026/27
	Marina Drive Car Park, Ellesmere Port	2 x 50kWh rapid chargers, plus parking reconfiguration	Residential and Destination	2026/27
	Kingsway Car Park, Winsford	2 x 50kWh rapid chargers	Residential and Destination	2026/27

	Hadfield Street Car Park, Northwich	2 x 50kWh rapid chargers, plus lighting and CCTV	Residential and Destination	2026/27
	Grosvenor Park (on street)	2 x 50kWh rapid chargers, with parking reconfiguration and footway widening	Residential and Destination	2026/27
Provision of <u>fast</u> chargers to help build a strategic base charging network.	Watermans Car Park, Northwich	4 x 22kWh fast chargers (if not being provided by adjacent Lidl)	Destination Charging	2025/26
	Brio Ellesmere Port Sports Village	4 x 22kWh fast chargers	Destination Charging	2025/26
	Brio Lifestyle Centre Car Park, Winsford	4 x 22kWh fast chargers	Destination Charging	2025/26
	Brio Recreation Centre Car Park, Neston	4 x 22kWh fast chargers	Destination Charging	2025/26
	Frodsham Station Car Park	4 x 22kWh fast chargers – potentially also rapid if not available in nearby commercial operators	Destination Charging	2025/26
	Station Avenue Car Park, Helsby	4 x 22kWh fast chargers	Destination Charging	2025/26
	Bell Meadow Court Car Park, Tarporley	4 x 22kWh fast chargers	Destination Charging	2025/26

	Tarporley War Memorial Hospital	4 x 22kWh fast chargers and parking reconfiguration	Destination Charging	2026/27
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Figure 13: Indicative Implementation Plan