

WSSC electric vehicle charging strategy



Early investment in infrastructure to support the transition from petrol and diesel vehicles to alternative fuels and electric vehicles is critical. Long-term it will also help improve air quality and reduce carbon emissions across the whole county.

WSSC EV strategy and resident consultation

Energy Saving Trust began supporting WSSC in 2018 on strategy development and remained involved as impartial subject matter experts. In December 2019, WSSC approved an EV Strategy with three key aims:

1. 70% of all new cars in the county to be electric by 2030
2. Infrastructure to support vehicles reliant on public chargepoints
3. Ensure a renewable energy source for all chargepoints

The strategy committed the county council to enabling charging infrastructure to be installed on land and on public highways for public use, and to engage with partners to ensure a charging network that uses public and community land. The strategy took a cautious approach in investing limited funds, and it set out that WSSC would seek a market-based supplier to deliver the strategy.

West Sussex County Council (WSSC) asked residents what would help them make the switch to electric vehicles. Residents, businesses and commuters into the county were asked 16 questions to see if the strategy will help address the initial barriers and give individuals the confidence to switch to EV's. The survey showed that **lack of public charging points** and **range anxiety** were the two most significant factors discouraging people from switching. WSSC took those results and produced a draft Electric Vehicle Strategy. There are currently many personal, social, infrastructure and commercial barriers to electric vehicle adoption:

- There is only one charge point per 62 EVs in the UK and forecasts in the Competition and Markets Authority's 'Building a comprehensive and competitive electric vehicle charging sector that works for all drivers' suggest 280,000 - 480,000 public charge points are needed by 2030. In 2022 we installed 8,600
- New EVs are currently still more expensive to buy than equivalent petrol or diesel alternatives
- Many EV owners still have 'range anxiety' re EV real-world performance and lack of charge points
- The EV charging infrastructure is not well enough established around the UK to increase confidence
- Street lighting EV charge points are too far in from the kerb and are too low power to charge EVs
- Most EV charge points are low power and therefore inconvenient, taking many hours to fully charge an EV
- Costs of running EVs versus small petrol turbo and diesel engine vehicles are not substantially lower
- Failed EVs are too heavy to push off the road (2 tonnes). A failed Tesla gridlocked Salisbury roads 9 hours
- Whole-life environmental cost of new EVs does not break-even for seven years vs fossil fuel vehicles
- There is still environmental concern over buying new EVs (option to convert current vehicles to EVs)
- Despite Government commitment to having only EVs after 2030 there may emerge better alternatives
- The UK power grid has insufficient capacity for a wholesale move to EVs and needs an expensive upgrade
- 40% of people will simply not be able to charge outside their homes as they live in flats or apartments
- New after-market innovations to convert large / public service diesel vehicles to run on 90% Hydrogen
- Ford estimates a 3,800 UK job cut in the UK in a move to EVs as they require 40% less staff to make them

West Sussex Chargepoint Network

WSSC EV Strategy, adopted in Dec 2019, delivers a countywide public EV chargepoint network. Fully funded by Connected Kerb, with zero cost to councils, it also benefits the 40% of EV users with no off-street parking.

West Sussex County Council partnered with six of the district and borough authorities in West Sussex – Adur, Arun, Crawley, Horsham, Mid Sussex and Worthing – joined the partnership. WSSC then signed a contract with Connected Kerb in November 2021 to deliver the West Sussex Chargepoint Network. Chichester was the only Council in West Sussex that chose not to be included, although they joined in 2022.

West Sussex County Council is now managing the UK's largest council-led EV charging project.

- <https://www.connectedkerb.com/west-sussex-chargepoint-network>

Portfolio approach

To ensure that profitable sites came forward, plus sites where individuals and communities need chargepoints but where they might be less commercially viable (likely to be more rural communities), the council required a 'portfolio approach' to delivering the countywide network. This solution requires the revenue from more commercially viable sites to support delivery of less commercially viable, but socially critical sites, across the county, with transparency concerning financing and profit to ensure oversight that this was being delivered.

Network planning

WSCC considered going to market with a fully developed network plan, but decided not to for these reasons:

- Producing a detailed plan for the county, factoring in all community and highway land, would have been a significant and resource intensive exercise, when resources were not available.
- Suppliers said that they run their own analysis and test site feasibility, effectively repeating the work.
- Through supplier engagement it became clear that different operators viewed and assessed attractive and commercial sites very differently, and WSCC was very keen to protect its portfolio approach principle.

It was specified the supplier would use their market expertise and work with local authority partners to develop a network plan that meets their commercial requirements, but also reflects the community need and portfolio approach that is integral to success. This also meant that no ORCS money was secured in advance of procurement.

Procurement process

WSCC took two attempts to secure a supplier. The first tender had to be abandoned post-contract award due to the supplier requesting significant changes to the specification and financial make-up of the service, which fundamentally differed from the published tender. The council decided to start the procurement process again. With no upfront financial investment available either from partners or government funding, a concession contract was the only option available.

Supplier engagement

Formal supplier engagement occurred before each tender process. In addition, specific feedback was sought from suppliers who had been expected to bid but had not. Supplier engagement was useful to test and refine approaches but should also be considered as a snapshot in time. WSCC would advise being direct when engaging with suppliers and push the market for definitive answers to key questions, as well as check understanding of the issues being raised.

Framework or tender?

The partners initially chose to go to tender due to the following reasons:

- In 2019 only a few concession frameworks were available with most near end date or due for review.
- The frameworks did not support the portfolio approach.
- At the time frameworks required sites to be specified in advance.
- Most of the suppliers that had responded and impressed the council during formal engagement were not named on the available framework contracts.

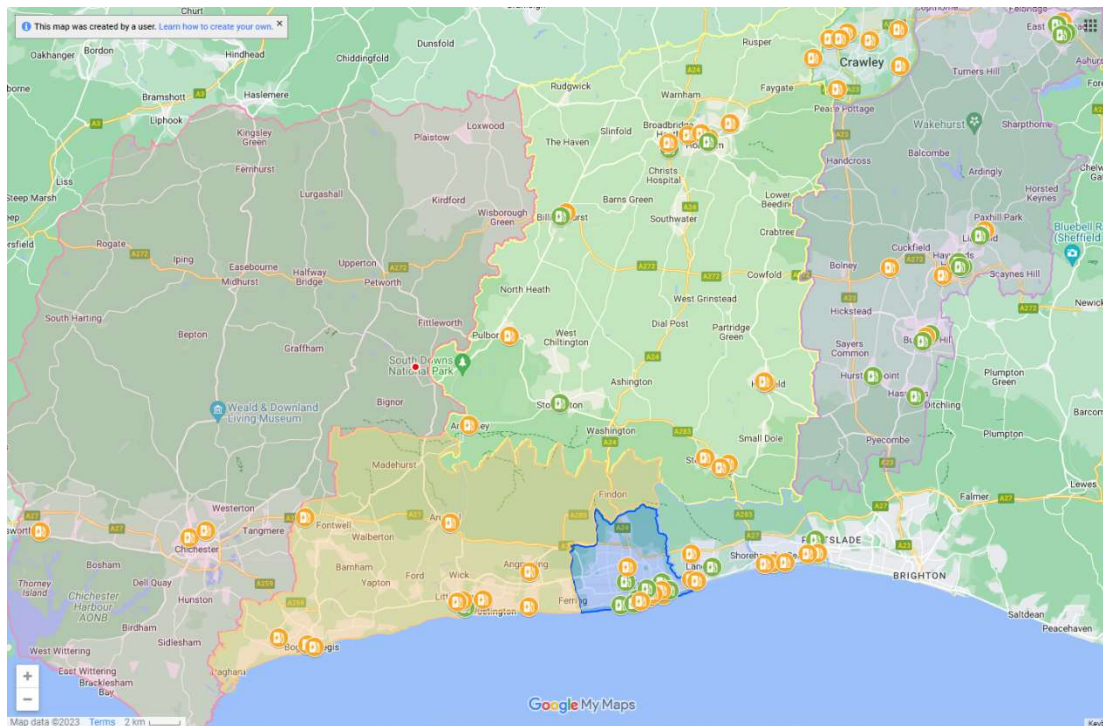
Contract length

In the initial tender process, the contract length was 10 years with an option to extend annually for a further five years. The second contract now awarded is for 15 years with an opportunity to extend for 5 years.

The change reflected the main learning from supplier feedback, which was that minimum contract length will be used by the suppliers to assess the level of risk they are being asked to accept.

Current and 2023 planned EV chargepoint locations – total 82

Initially only WSCC owned land has been used and much of the infrastructure was installed during early 2023.



<https://www.connectedkerb.com/charge-your-car/community-pages/west-sussex-chargepoint-network/>

A key challenge in rural areas and smaller villages is that 6 EV points had to be installed per site to make the Connected Kerb infrastructure viable. This caused issues with limited car parking space where EV areas had to be marked out for EV only use and this prohibited other vehicle users parking in these spaces. This has now been partly resolved by having two marked 'EV only' bays and four others for joint EV / other vehicle use.

2023 install plan:

- Mid Sussex: 19
- Horsham: 17
- Worthing: 14
- Arun: 12
- Adur: 9
- Crawley: 8
- Chichester: 3 (Garsons Road Southbourne, Little Breach and Palmers Field Avenue Chichester)

So far only 14 car parks have had EV points installed by Connected Kerb (none in Chichester)

- Chequer Mead Car Park
- Vicarage Car Park
- Norton House Car Park
- Hazelgrove Car Park
- Franklynn Road Car Park
- Trinity Road Car Park
- Denmans Lane Car Park
- Orion Car Park
- Cyprus Road Car Park
- Station Road Car Park, Mid Sussex
- Billingham Library Car Park
- Mill Stream Car Park (Storrington Library)
- North Street Car Park
- Queensway Car Park



Expanding the West Sussex EV network

Partnership approach

The EV Strategy committed the county council to enabling a charging network that uses public and community land. It chose to focus the initial partnership building with the higher tier authorities and approached all of the district and borough councils within the county to see if they would be interested in moving forward together. The contract was structured so that in addition to WSCC and the partner authorities, other organisations can access the framework, including parish and town councils, social housing providers, community groups, faith groups, village halls, schools and non-for-profit community landowners and public entities.

Funding and revenue share

The partner organisations intend to maximise the available government funding; currently the Office for Zero Emission Vehicles (OZEV) On-street Residential Chargepoint Scheme (ORCS). Once chargepoints are installed, Connected Kerb take responsibility for ongoing servicing and maintenance of all charging infrastructure. The WSCC contract includes provision for partners to receive a revenue share based on the kilowatts used. This is distributed in proportion to the number of chargepoint sockets on each landowner's property, regardless of the performance of the chargepoint on an individual landowner's property. The tender does not specify an exact number of chargepoints to be delivered. It only requires that the network delivered by the successful bidder meets the need of residents.

Joining the network

Community landowners are under no obligation to offer land for inclusion within the Connected Kerb network, but they will consider all community land when planning a charging network, with significant benefits:

- A joined-up solution, accessed in the same way across West Sussex, making it easier for people to use
- Provide chargepoints in the best locations for users, rather than in the places only the County, Borough or District Council has the land / space to offer them
- Increase chances of finding more feasible sites for delivery by maximising potentially 'in scope' public land
- Avoid duplicating EV charging provision in a single Council or Parish area

Benefits to Community Landowners

- Chargepoints will be installed at no cost
- Chargepoints will be maintained at no cost
- Chargepoints will be supported by a 24hr help line number to manage user queries
- Receive a small return based on number of chargepoints on land and the use of the county wide network

Register Land interest for EV charge points

The West Sussex chargepoint network aspires to work in partnership with all community landowners to provide a comprehensive and cohesive solution on public land. Learn more about how to register your interest & how you can get involved in the UK's largest council-led EV charging project, and much more.

- Register interest in offering a Connected Kerb EV chargepoint site - https://yourvoice.westsussex.gov.uk/wscpn_landowner?hsCtaTracking=2b8dc448-f3bb-4fc7-9dd9-865188b913eb%7C56b27426-f0c9-42f4-864c-843683dd057f

Registering interest will start a process of assessment of local landowner sites and does not commit them to being part of the network. Connected Kerb does not guarantee all sites will be feasible as they need to assess the site both meets their criteria of targeting residents without off street parking and is technically feasible.

- Connected Kerb brochure - <https://www.connectedkerb.com/media/czhnrsxs/connected-kerb-brochure-west-sussex-chargepoint-network.pdfv>

Email response from Connected Kerb July 2023

1. How many installs are planned for 2023? (I've heard 250, mainly car parks).

We are currently reviewing 60 car park locations. Unlikely they will all be installed this year, and some will be moved to next year based on various reasons, e.g., short lease terms, proposed improvements/works, etc. Also, the number of proposed chargers has not been confirmed and car parks can vary on the number of chargers in them, some have had 8 installed in the past, whilst others have 4 based on the size of the car park. Regarding on-street installs, consultation has recently gone out for 132 locations. Past experience suggests these numbers will drop, and we will not know the true number we can progress with until autumn this year. Also, only a small % of the on-street locations are likely to be installed in 2023 as it's all subject to consultation and when they come through.

2. What is the charge rate in Watts at each of your charge points, or if it varies, what is the Wattage range?

We install 7kw on-street/car parks (typically takes 4 – 8 hours to charge an EV) and have a small number of 50 kw in car parks (takes about one hour to charge an EV).

3. What is the charge cost to residents for CK charge points in pence per kWh?

Cost to charge is 50p p/kw for the 7kw, including VAT, in line with the energy costs and other providers.

4. There was an issue with having to install 6 charge points on WSCC land on the initial EV charge allocation points. Is the latest plan to install 6 bays but only put in two charge points?

The current consultation is based on 2 different approaches. The proposal is for 6 chargers.

(i) Some of the locations will have 2 active bays and 4 passives. The 4 passives consist of installing the underground infrastructure and activating it when demand for the chargers goes up. There will be no overground equipment and only 2 bays will be in use.

(ii) Second approach consists of installing 6 chargers but only line marking 2 bays. Again, until demand rises, residents will be able to use the other 4 bays. This approach will be reviewed on an ongoing basis.

5. Will Connected Kerb consider only putting in bays for 2 cars, as this is the only likely option in many of the rural areas around West Sussex?

We are currently in the process of reviewing our site selection strategy and appreciate that not all locations can accommodate 4 or 6 chargers.

6. How do Parishes put forward land for consideration for EV charging points and is the minimum still space for 6 cars?

Parishes can put forward requests on WSCC website where there is a form dedicated to this. Once the form is completed, we contact the Parish to discuss the details. The number of chargers proposed is on a case-by-case basis. See link from the website here. [Register Community Land to be considered for the West Sussex Chargepoint Network | Your Voice West Sussex](#).

7. Can you do lamp post charging installs for EV top-up?

Where lamp columns are at the front of the pavement and our equipment is not fit for purpose on the street, we will consider lamp column chargers.