

# ELECTRIC VEHICLE (EV) PROGRESS UPDATE – NOVEMBER 2020

Please find a summary of the various EV progress updates made within Medway, in advance of the next Climate Change – Members Advisory Board on 8<sup>th</sup> December 2020.

## MEDWAY EV OFFICER GROUP

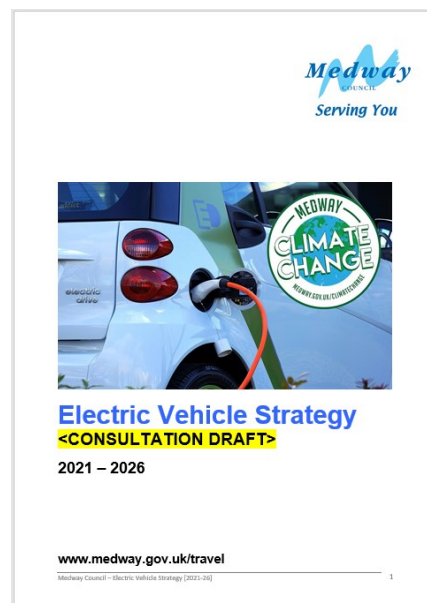
In view of the progress that Medway Council are looking to make in relation to the electric vehicle [EV] agenda over the foreseeable, an internal Medway EV Officer Group has now been established to help inform our strategic direction going forward. Meetings are scheduled on alternate months, with the first meeting having taken place in October 2020.

## DRAFT MEDWAY EV STRATEGY 2021-2026

Five-year EV strategy drafted and circulated to members of the Medway EV Officer Group for internal comment in November 2020. This incorporates Government's latest announcement on 18 November regarding the ban on the sale of new petrol and diesel cars and vans in the UK being brought forward from 2040 to 2030 under the PM's 10-point plan for a 'green industrial revolution'.

The scope of Medway's strategy will be to forecast future requirements for public electric vehicle recharging infrastructure. The structure includes:

- a vision and objectives
- a baseline for the amount and locations of existing charging infrastructure in Medway and on the Strategic Road Network (A2/M2).
- current EV uptake scenarios for plug-in vehicles
- suitable locations for EV charging point infrastructure
- work to alter the Council's Taxi and Private Hire Licensing Policy to encourage the smooth transition to 100% EV.
- an overview of the Council's fleet.



## MEDWAY EV SURVEY RESULTS

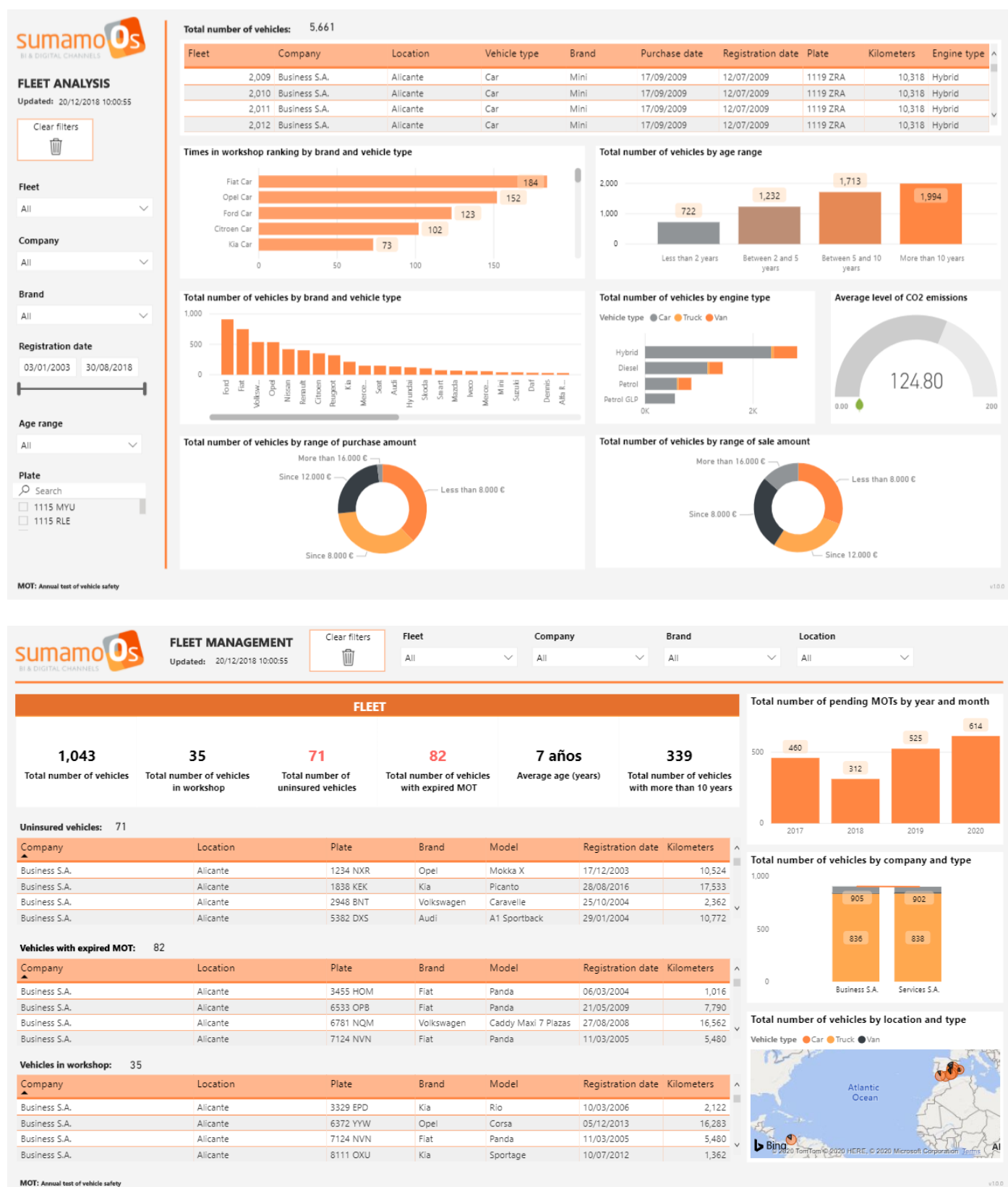
An online survey has been published on the Council website since June 2020 to explore the demand for electric vehicle charging points across Medway. This is intended to help inform potential EV charging locations and to demonstrate the local need when applying for funding.

143 survey responses have been received over the course of a five-month period, between Tuesday 16 June and Monday 16 November. 40% of respondents currently own an electric vehicle, with the biggest barrier to purchasing an EV being the lack of available public charging points. The majority of EV owners that have responded to the survey currently charge their vehicle at home or at a retail premises car park. According to the survey responses received to date, 56% of non-EV owners intend to purchase one within the next 12 months.

The survey also provided opportunity for respondents to suggest locations for on-street charging points within Medway. The vast majority provided personal addresses. Public locations have included Twydall Green, Dockside Outlet, Hempstead Valley Shopping Centre, Riverside car park and town centres.

Discussions are also taking place with the Council's Business Intelligence Team to create an EV survey results dashboard, published and updated on the Council website.

The dashboard will be potentially developed on Power BI to include graphs, charts and mapping updates to reflect EV charging point location requests, along a similar format to the following:



The EV charging point survey remains open and can be accessed via:  
[https://www.medway.gov.uk/info/200161/travel/1130/electric\\_vehicle\\_charging\\_points](https://www.medway.gov.uk/info/200161/travel/1130/electric_vehicle_charging_points).

## MEDWAY ELECTRIC VEHICLE FAQ DOCUMENT

A frequently asked questions document, specific to Electric Vehicles, is now available to access on the Council website. The document is intended to address the most common questions around EV's, ownership, charger types, costs and available grants. It also provides an overview of the existing EV charging point locations in Medway and accompanies Medway's EV Strategy 2021-2026. The document can be accessed alongside Medway's EV survey via:

[https://www.medway.gov.uk/info/200161/travel/1130/electric\\_vehicle\\_charging\\_points](https://www.medway.gov.uk/info/200161/travel/1130/electric_vehicle_charging_points)

long period, such as at a Park & Ride or office car park, slow charging may provide the optimum solution. Because of the longer charging times over fast units, slow public charge points are less common and tend to be limited to street furniture that has a limited supply capacity.

Most slow charging units are rated at up to 3kW with some lamp-post chargers being rated at 6kW. Charging times vary depending on the charging unit, the EV's supply capacity to the charger unit and EV being charged, but a full charge on a 3kW unit will typically take 6-12 hours. Most slow charging units are untethered, meaning that a cable is required to connect the EV with the charge point.

While slow charging can be carried out via a three-pin socket using a standard 3-pin socket, because of the higher current demands of EVs and the longer amount of time spent charging, it is strongly recommended that those who need to charge regularly at home or the workplace get a dedicated EV charging unit installed.



**What is Government Policy on Electric Vehicles?**

In its Air Quality Plan, published in 2017 the UK Government set a target to ban the sales of new petrol and diesel cars by 2040. In 2019 Government released its Road to Zero Strategy outlining a pathway towards achieving this. Key points are:

- The strategy sets out ambition for at least 50% — and as many as 70% — of new car sales to be ultra-low emission by 2030.
- Government will take steps to enable massive roll-out of infrastructure to support an electric vehicle revolution.
- The strategy sets the stage for the biggest technology advancement to hit UK roads since the invention of the combustion engine.

You can find the strategy online:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/820000/road-to-zero-strategy](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/820000/road-to-zero-strategy)

**What do chargers look like?**

Chargers vary a lot in appearance. Fast chargers range from wall mounted chargers (mostly commonly used on people's homes) to chargers that resemble bollards. Rapid charging units tend to be bigger and have a more standard appearance.



**Do Electric Cars cost more than regular cars?**

Electric Cars do currently cost more than a comparable petrol or diesel car. But it is generally predicted that as the EV market develops, battery costs — and therefore vehicle prices — will continue to drop. In the last five years battery production costs have fallen by almost 80%. The battery is one of the largest and most expensive elements of an EV, and with production costs dropping, the time when an EV costs the same as a comparable conventional model (or even less) is predicted by some in the industry to be only a few years away.

Deloitte published research in January 2019 that predicts that EVs will achieve cost parity with conventional vehicles in the UK as early as 2021. From this point, cost will no longer be a barrier to purchase, and owning an EV will become a realistic, viable option for more people.



**Why do we need an Electric Vehicle Strategy?**

The Council's preferred approach to providing EV charging points is to develop a strategy that sets out clearly what our long-term ambition is, our priorities for action, and is clear on our requirements.

In developing the strategy we are listening to residents views on their preferences for charging locally, through the completion of an online survey (link below) and will be modelling what different electric vehicle uptake scenarios will look like across Medway. We are seeking to understand both the number of vehicles that would be involved and the number of charging points that might be required to support them.

By doing this we hope to ensure that investment is used wisely with chargers installed in the right places that are fit for purpose.

To complete Medway's Electric Vehicle Charge Point Survey, please visit:  
[https://www.medway.gov.uk/info/200161/travel/1130/electric\\_vehicle\\_charging\\_points](https://www.medway.gov.uk/info/200161/travel/1130/electric_vehicle_charging_points)

Please refer to Appendix 1 to view a results summary based upon the EV Charging Point Survey feedback received between June and September 2020.

**Why is this strategy focusing on Electric Vehicles, not all Ultra Low Emission Vehicles, such as hydrogen?**

Our strategy will focus on solutions where we can make the biggest impact on the Medway's carbon emissions.

We have looked at the Department for Transport's current and future predictions of the carbon generated by road transport in Medway, and 79% would be attributable to cars and small vans.

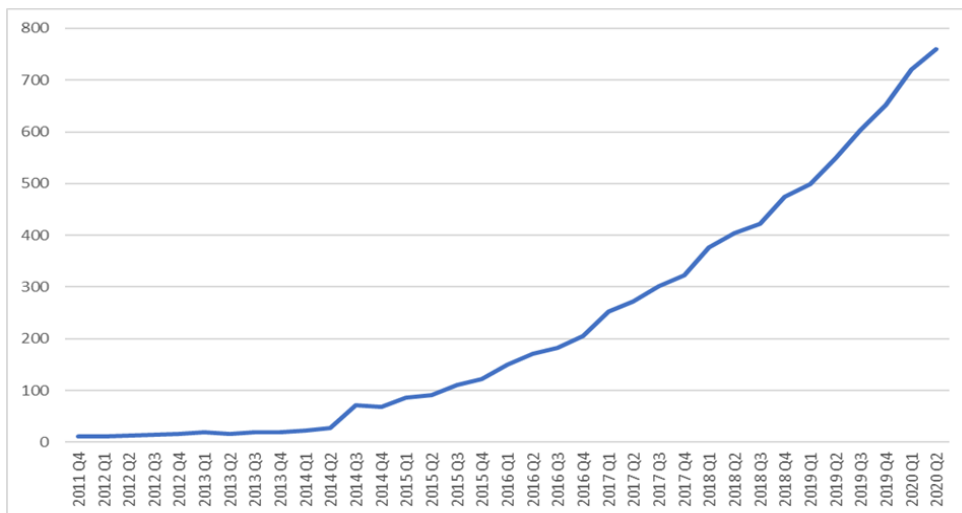
There is still much debate as to which fuel will become the long-term solution for vehicles of the future, but we have taken a view that we need to take action.

Currently electric vehicle technology is the most advanced for cars and small vans, and people will be able to make the switch now, or in the very near future. If we need to develop an alternative fuel strategy in later years, we will do so.



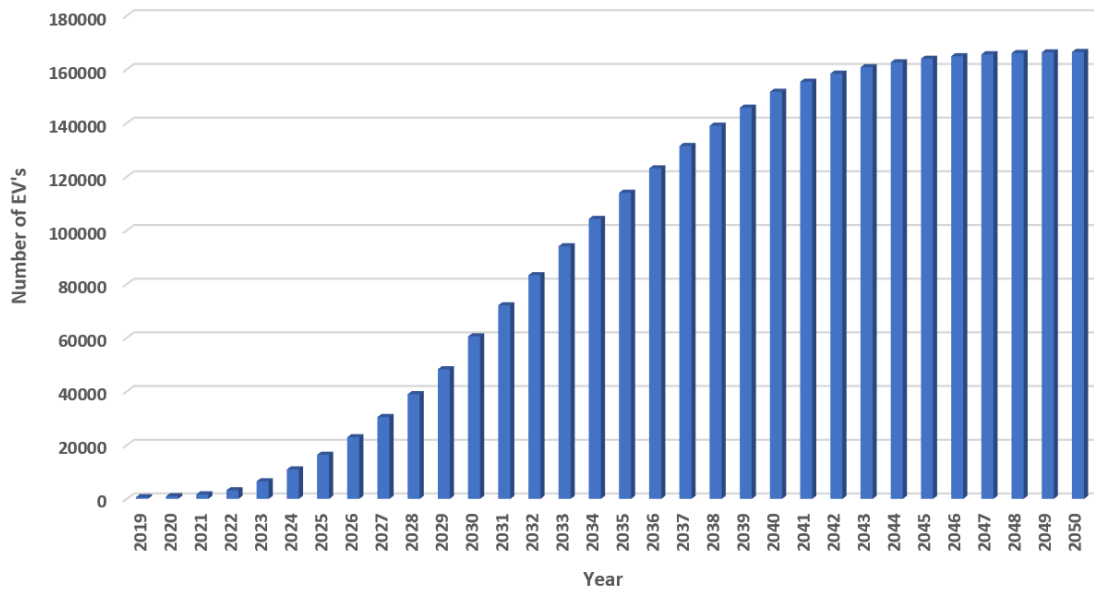

## EV UPTAKE SCENARIO DATA

UK Power Networks have provided access to various datasets, including information specific to Medway, relating to future energy scenarios for the full range of different types of electric vehicle including vans, buses and HGV, motorcycles and taxis in addition to various aspects of commercial demand.

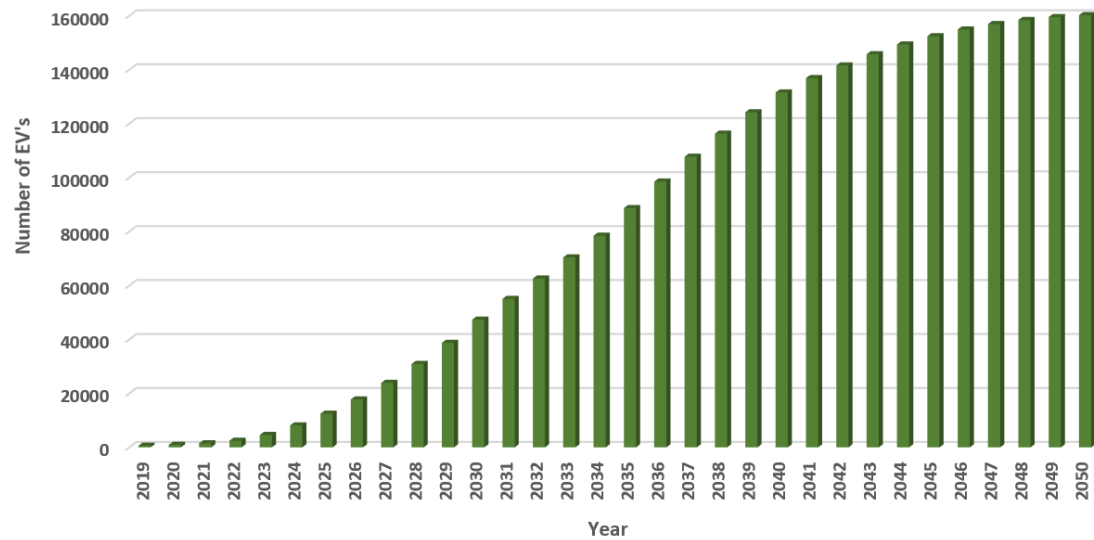


Ultra low emission vehicles (ULEVs) licensed in Medway between 2011 and 2020. REF: GOV.UK

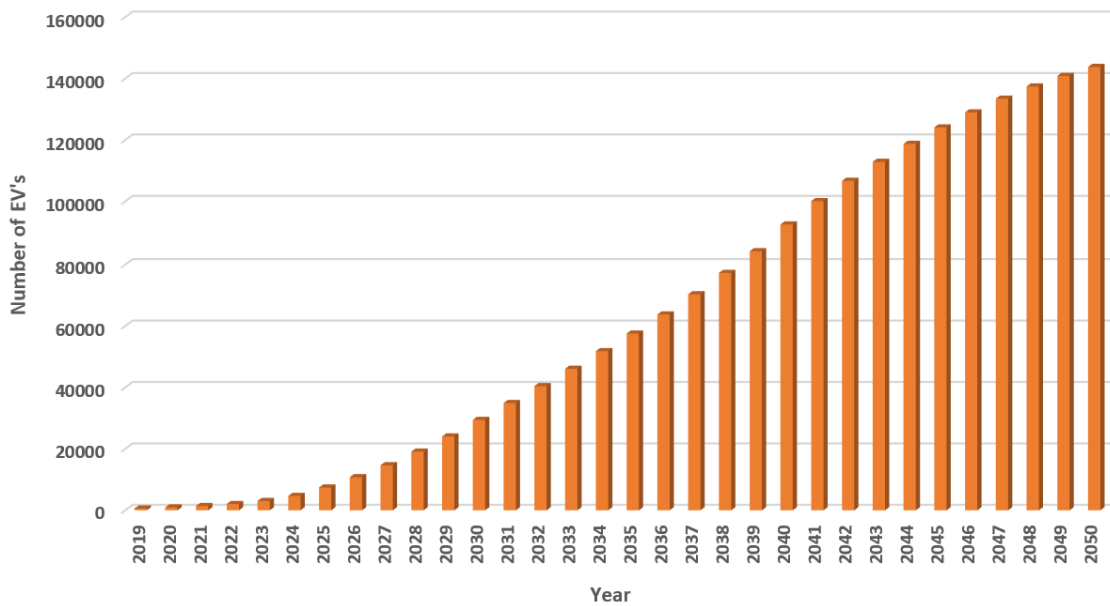
The Distribution Future Energy Scenarios (DFES) illustrate energy futures with different levels of decentralisation, decarbonisation and digitisation. They are constructed from a series of key drivers, which will have significant impacts on energy demand and supply, including the number of electric vehicles. The DFES are able to provide a detailed understanding of the way in which local electricity demand and generation will change in future, so that an efficient network capacity investment can be planned, whilst maintaining a secure supply of electricity and facilitating continued electricity decarbonisation. Information is currently being analysed in further detail, including EV update scenarios and power network grid capacity in line with EV charging point infrastructure needs and will feed into Medway's EV Strategy development.



**ABOVE: Medway EV Car Ownership - High Uptake Scenario, 2019 – 2050 [PHEV & BEV]**



**ABOVE: Medway EV Car Ownership – Medium Uptake Scenario, 2019 – 2050 [PHEV & BEV]**



**ABOVE: Medway EV Car Ownership - Low Uptake Scenario, 2019 – 2050 [PHEV & BEV]**

## EV DISTRICT NETWORK

Medway Council have maintained ongoing communication with partners in Kent in relation to electric vehicle opportunities, in the hope that a consistent EV charging network can be achieved across the entire county. This approach will help ensure a seamless charging link for EV users when travelling to and from Medway into the wider county. With this in mind, Medway will be attending an EV district network in December to discuss the next stages of the Kent-wide EV charging hub with colleagues from KCC's Transport Innovations Team.



### MHS BROADSIDE EV PILOT

Matt Pinder, the Council's Smart Cities Project Officer, has successfully led an Adult and Social Care pilot project at Broadside MHS Homes Offices in Chatham. The project has involved work with an EV Hire company to lease several vehicles and provide EVCP infrastructure over a 12-month period, to accommodate social worker staff. Work has now been completed on this project and will be reviewed.

## REFIT PROGRAMME

Refit is an "invest to save" initiative led by the Council's Capital Projects Team, where the contractor is made to guarantee the energy and carbon savings and thus the return on investment (ROI). Several options are available to fund the cost of the energy efficiency improvements, including the proposed installation of over 30 EV charging points in selected locations across Medway under the first phase, scheduled for Summer 2021. Locations include Gun Wharf, Medway Crematorium Chapel, Medway Park, Chattenden Community Centre, Cuxton Library, Wigmore Library and The Brook multi storey car park.

## VEHICLE TO GRID (V2G)

The Council met with representatives from Eon and Nissan in November, to consider smart charging and reducing demand on the grid at peak times, including solutions for pricing incentives to encourage charging off peak, and the feasibility of vehicle to grid (V2G) for charging EV fleets.



Vehicle to grid (V2G) is a new technology that allows electric vehicles (EV) to feed energy stored in their batteries back to buildings, or to the electricity grid via bi-directional flow. This enables EV fleets to financially benefit from, as well as contribute to a more sustainable carbon neutral future. The project involves rapid 10kw dc conversion to ac chargers; however, these are only currently compatible with Nissan electric vehicles, with various logistics to consider alongside this project.

## OTHER STAKEHOLDER ENGAGEMENT

Discussions are ongoing with stakeholders in progressing opportunities linked to Medway's EV agenda, including the Energy Savings Trust and UK Power Networks. The latter will assist with establishing the existing power network capacity within Medway and identifying additional needs, particularly within any key locations identified for EV charging point infrastructure. It is hoped the information can be established prior to engaging with suppliers, identifying and progressing funding opportunities and ultimately installing charging infrastructure in line with Medway's vision.