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Event summary

MM Movement Matters events

**NET ZERO BY 2030
FACT OR FICTION?**

SESSION 4: ZERO EMISSION MOBILITY

Environmental and sustainability policies are driving electric vehicle deployment across the UK, while policies are being tailored to support national market transitions. The transition to EVs should ultimately provide substantial benefits to consumers, however in the short term there is increased anxiety around access, awareness and quantity of the charging infrastructure to support the change. This session introduces how EV charging infrastructure is being rolled out and driven forward, the challenges faced and how they can be addressed.

Speakers' presentations

Tim Middleton, Transport Innovations Programme Manager, Kent Council
Nathan Piper, Sales Manager, InstaVolt
Lisa Martin, Head of UK Planning and Director at Steer chaired the session.

The first speaker, **Tim Middleton**, leads Kent's rollout of EV charging infrastructure. Tim stated that Kent County Council (KCC) has been working on EV charging infrastructure for about 2.5 years and that it's now becoming a hot topic, especially with COP26 and similar events taking place.

He shared that KCC has been working on several EV projects, with the biggest one being a district-wide charging network. He explained that KCC is a highway authority divided into 12 local authority districts plus Medway Unitary Authority. The project is currently called "Kent 600", but he hopes to be able to call it "Kent 800" or "Kent 1000" in a few months, as they

expand their network. Connected Kerb and Osprey have been awarded the tender to set up these chargers. There are a minimum of 4 chargers in each location, but in reality, most locations will have more than that. There is a mix of charging speeds being delivered under this project.

A similar project is the Parish EV Charger Network, which was set up due to calls from the Parish showing a huge interest in setting up a network. Although demand is lower in this more rural area, and connection costs are tricky, KCC have been able to utilise grants that have made it possible to install this charging infrastructure in smaller communities on parish-owned land. KCC give a 30% profit share back to the parish, to spend on their community. Customers are able to go from one parish to the next and have a similar charging experience in each. There is a big waiting list for more chargers; hope to get to 100 chargers by the end of 2022.

Another project going on is a Rapid Taxi & Private Hire EV Charger Network, which is a small project for only 14 rapid chargers. A good project for encouraging the take-up of electric vehicle taxis.

This project, as with many of them is trying to solve the chicken and egg scenario of, “well I can’t get an electric vehicle unless there’s a charger I can use or a good network”.

But of course, this is tricky for us to put the network in when you don’t have the vehicle numbers to support that. KCC has published an On Street Guidance for Districts – S115 document for districts. On Street doesn’t seem to be a direction we are going in at the moment, but it is possible this might change.

In the future, KCC plan to tackle On Street and Parish locations, as well as the district charging networks. It looks like we are heading towards rapid charging hubs. We’re starting to identify pieces of land that were not obviously valuable before but could be useful for establishing hubs. KCC are also looking at their own depots, offices and fleet. For example, they have the Kent REVS initiative which encourages local businesses in Kent to hire an electric van for free for a few months to see if they like it and see if it fits their business needs.

[Initiatives like Kent REVS] “helps them to steer towards what their future might look like, electrified.”

The second speaker for the session is **Nathan Piper** from InstaVolt. InstaVolt is the largest network of owner-operated rapid electric vehicle charging stations in the UK providing on the go recharging. Nathan leads the rollout of rapid charging stations across InstaVolt’s KFC and Costa Coffee portfolios, while expanding the company’s offering, driving a Fleet product to support businesses electrifying their Fleets.

InstaVolt has over 700 rapid chargers across the UK and these are a 100% fully funded offer – so no upfront or ongoing costs to partner-landlords. These are 50kW-150kW rapid DC chargers, providing 250 miles of range in 30 minutes. There is 99.7% availability across the network, with all

maintenance handled by in-house team of service engineers. Customer service support lines are 24/7, supported by the AA. InstaVolt are one of the first to offer contactless payment. All electricity for the chargers is from fully renewable sources like solar and wind.

Today there are more than 340,000 battery EVs on the roads. In 2020, there was the biggest EV registrations in the UK. 92% of electric car drivers (including those with off street charging) rely on public charging at least one a month.

“Week on week, we’re reporting records of utilisation on our network and as demand and utilisation grow, we’ll continue to develop and expand the network to stay aligned with the substantial uptake of EVs.”

InstaVolt plan to meet demand by expanding using partnerships with leading brands like McDonald, KFC, Costa Coffee, etc. They have a pipeline to deliver 5,000 chargers by 2025 and 10,000 by 2030. They have won a number of awards and have asked customers what they need. Three needs were identified: reliability, ease of use (should be as easy as filling a petrol or diesel car), and fast charging on the go.

We understand that LA’s, business owners and fleet operators are increasingly demanding more environmentally friendly transport options. There is also more transparency around climate change-related solutions. It’s also an opportunity to attract new customers. InstaVolt’s network has resulted in increased site footfall, increased dwell time, enhanced community reputation and increased revenue.

Some of the challenges in building a national network include: i) securing the necessary power from the grid, ii) securing the relevant consents, iii) aligning the correct charging solution, iv) maintaining a reliable network, v) building consumer confidence.

One of the biggest barriers to EV adoption are the misconceptions about EVs experienced by those who don’t use them. Example myths/questions are: Will the charger be working? Will it take long to recharge? Is the charger easy to use/Do I need an app or a card? InstaVolt believe they have changed the perception of public charging in the last five years. They have been voted the UK’s Favourite Public Charging Network for three years. InstaVolt have worked with local authorities such as Mid Devon District Council. They have also worked with Somerset West and Taunton, with the rollout of rapid chargers across their districts.

Q&A

The session was then opened to questions by the chair, Lisa Martin. These questions posed deeper insights into the topic and explored issues such as:

- how can we ensure EV adoption improves social inclusion by improving access to all modes of transport?
- the challenges of installing charges on the public highway
- the impact of government mandating public charging infrastructure in car parks
- what the government can do to further assist EV adoption

All questions are answered by Tim Middleton (TM) and Nathan Piper (NP).

It was interesting you put up a slide on the Myths. We're seeing more EVs being sold across the country; do you think the challenge of range anxiety has gone away?

NP: It's still there, but we try to put infrastructure in the right place...two years ago, you couldn't drive to Scotland on our network – today you can. We have 700 rapid chargers in the UK and will grow massively to 5,000 in 2025. We're rapidly growing and have the partnerships to do that. We're knocking down the barriers and we're doing it quickly.

TM: It used to be a more prominent issue...from LA perspective we see that most people use off-street parking; the data shows that that is where most people charge up. They may not charge every day. People then go and use chargers like InstaVolt to charge during journeys. However, 40% of people in Kent don't have off-street charging and that's where the anxiety is. We need to solve that as a local authority. There is the anxiety of not being able to get to the charger, or that it may not be maintained...reliability and availability is a different challenge.

Are you installing chargers in car parks near public transport interchanges where people might be switching on to PT, so they can slow-charge their vehicles through the day?

NP: Our chargers are more suited to high footfall areas; so Park and Ride sites situated near busy A/M roads can be suitable and we'll consider taxi hubs to support mobility hubs. In terms of enabling customers to charge vehicles while they jump on to PT, that's not a solution that we offer – This is more suited to an AC charger which can be left charging for seven or so hours. We don't offer an AC model.

TM: We have the whole stretch of charging needs; give it 20 years and who knows what the dominant way of charging will be. At the moment, a lot of people want to charge overnight, or while they're at work. So, we try to address the whole spectrum. Quite often we do research, consultants identify great spots...then we try do investigations with UKPN (the local DNO) and they find that there's no access to power in that location, or that establishing access is not viable. Transport hubs are certainly the future in terms of how we would like to angle our work.

Question for Tim – You mentioned the challenges of installing chargers on the public highway? Can you expand on this?

TM: Whenever I go anywhere new, I like to think about where I'd put chargers but 9 times out of 10, it's extremely difficult, e.g., if there are rows of terraced houses (quite a few in Kent), streets and pavements are very narrow. So, challenges are: street clutter, width of pavement, power

availability under road; tapping into street lighting network limits you to max. 5kW chargers...In Kent particularly we don't enforce the parking – the districts do, which adds another challenge. Tim's worry is that if they don't have a very considered approach, we might inadvertently create charging hubs where people from elsewhere come to use chargers.

The government are mandating public charging infrastructure in car parks. What are your thoughts on that, and how does this fit with your business model?

NP: This fits with our model already. We support it and the more pressure that government can put on it, the better. We are there to answer landlord and business operator queries. We want people using the chargers – we want to return our capital over the lease period.

TM: We've responded to the formal consultation as KCC. However, going through the process and looking at power availability, I think more thought needs to go into power access in car parks. Not every car park is perfect for charging; need more nuance in considering car parks. But generally, they are good places for it.

Many EV-supported policies mean that driving a car is becoming more attractive relative to using other modes of transport. For a long time, we've been encouraging people using PT to travel by active modes. So how can we ensure EV adoption improves social inclusion by improving access to all modes of transport?

TM: KCC's view is that car driving is the last thing they should be encouraging (it is a last resort), even if electrified, e.g., because roads will still be congested, and road safety is an issue. Walking and cycling should be the way. Internally, decisions on road space aim to do things like create bike lane and reduce vehicle flow. "How are we moving goods and people?" – should be as clean as it can possibly be. There's no answer to this, it's a very difficult question to answer.

Average lease term you usually seek?

NP: It depends on the location, but briefly, typically between 15-25 years.

Where would you like to see innovation focused, and what would you like to see in order to make swifter progress towards net zero?

TM: I've said to DfT that LA's are very keen for clearer guidance on the role they are to play in charging infrastructure. It has largely fallen to LA's to decide; it's currently not a statute obligation – so where should funding go? It does seem like government is heading towards clearer guidance anyway. On Street charging is a big unanswered question for him right now. How do we rebalance debate of those who have a driveway (5% VAT), vs those who don't have one (pay 20%)? Interested to see more innovation in policy.

NP: Agrees with Tim on policy; no real structure or guidance on which route LA's should go and how they execute it. Some education is needed, as well as free will.

Looking forward, thinking about sustainable garden communities – how would these ideally be set up for/have good design to allow for EV charging?

NP: We require locations where people can do something (e.g., stretch legs, get coffee, etc. such as what people can do at McDonald's, Costa Coffee, etc.) while charging. There need to be on-site driver facilities/amenities; if it's residential, that's AC side...

TM: Ducting, passive provision; everyone heading towards heat pumps, EV charger; need to enforce grid to allow for that. So much easier to put in electric ducting when creating car parks than retrospectively.

If you had one ask of the government with respect to EVs going forward, what would it be?

NP: Giving LA's and councils free rein on what they can do.

TM: Very clear guidance, a range of options and standards across country that we can follow...at the moment, LA's are working it out themselves. Would be good to have a better steer on what we should be doing.

Note:

*Webinar reference – InstaVolt presentation: *Prices quoted (40p per kWh) correct at time of recording 18/11/2021. Price of 45p/kWh, effective from 1 December 2021.*