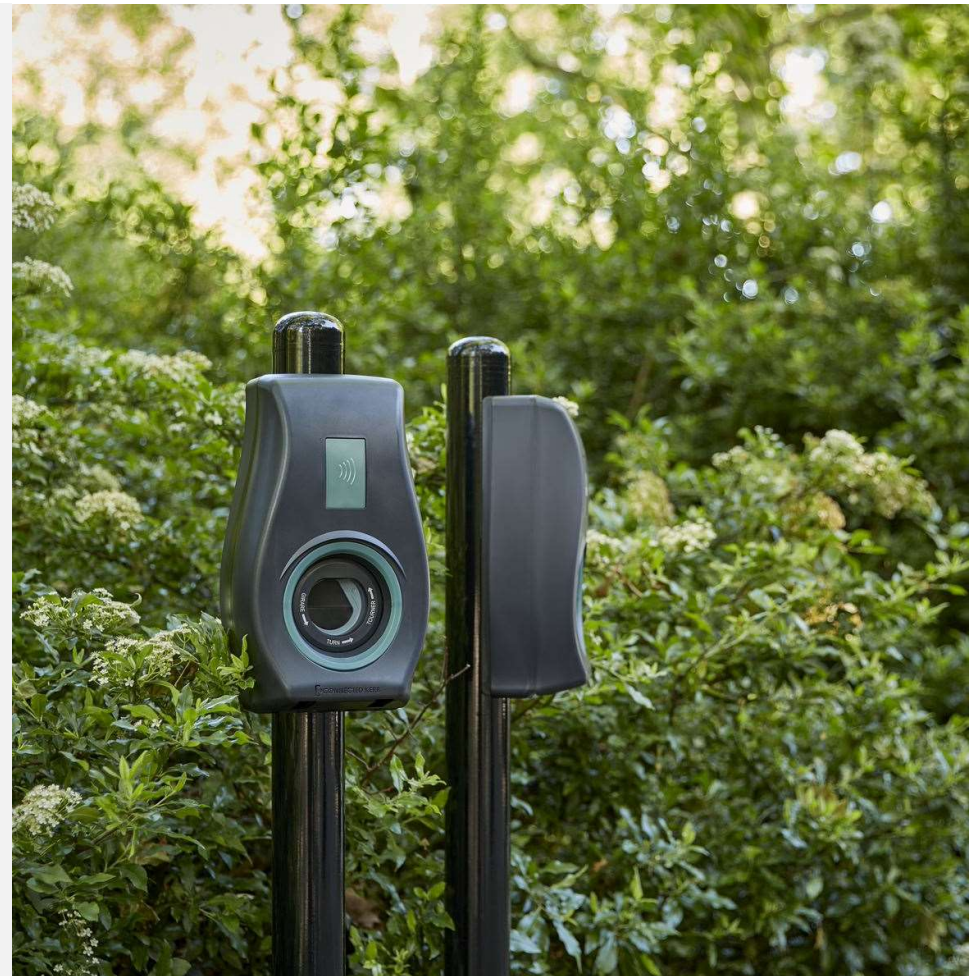




THE FUTURE IS ELECTRIC TRANSFORMING TRANSPORT FOR THE NHS

We're on a mission to become the most accessible, affordable and reliable player in our markets.



YOUR SPEAKERS TODAY

Claire Phelan

Net Zero Travel & Transport Project Manager
NHS England

James Bate

Senior Project Manager
South-East Greener NHS

Chris Pateman-Jones

CEO
Connected Kerb, EV Charging Solutions

Vicki Evans

Head of Public Sector Fleet & NHS
Connected Kerb, EV Charging Solutions

NHS EV Charging – A National View

Claire Phelan

Net Zero Travel & Transport Project Manager

NHS England

Current National Picture

- The NHS operates an owned and leased fleet of over 22,000 owned and leased vehicles
- Car grey fleet mileage approx. 250 million miles in secondary care only with emissions of around 79ktCO₂e
- Fleet data collection - 60% of sites have at least one EV charging point available
- 24% of trusts have self-reported that they have sufficient electrical capacity for the EV chargers they forecast needing
- Based on average daily mileages, 56% to 77% of all vehicles assessed could already be replaced by battery electric vehicles without relying on opportunity charging

Key Challenges

- Where to start?
- Cost
- Specialist emergency fleet – E.g. Double Crewed Ambulances (DCA's)
- Site capacity constraints
- Electrical resilience
- 10-15% of trust fleet vehicles are kept at employees' homes



Progress to date

- National Strategy in development
- Policy levers
- Stakeholder engagement and consultation workshops
- Fleet and site baselining
- Understanding demand
- Resilience and business continuity
- Tools and resources
- ZEEV Pathfinder
- Future of DCA's



Options & Planning

Emergency Vehicles

- Design and fund their own ultra-rapid network of chargers
- Sharing of chargers for emergency vehicles
- Utilisation of charging hubs E.g. bus station
- Collaboration with Government
- Hydrogen (rural areas)

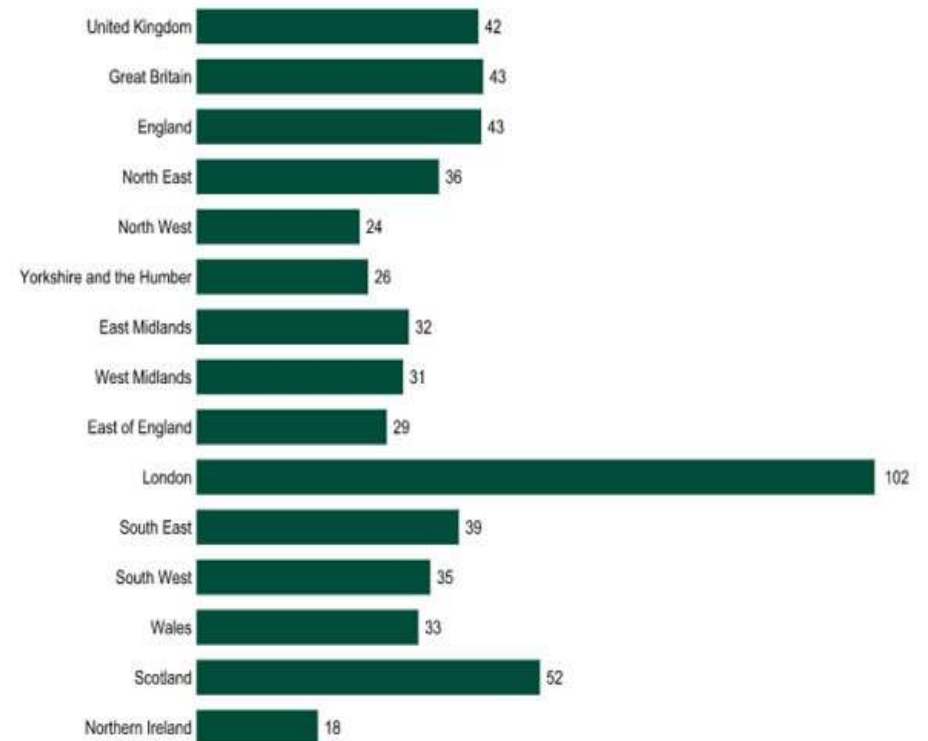
Non-emergency vehicles

- Utilisation of onsite overnight charging

Grey fleet

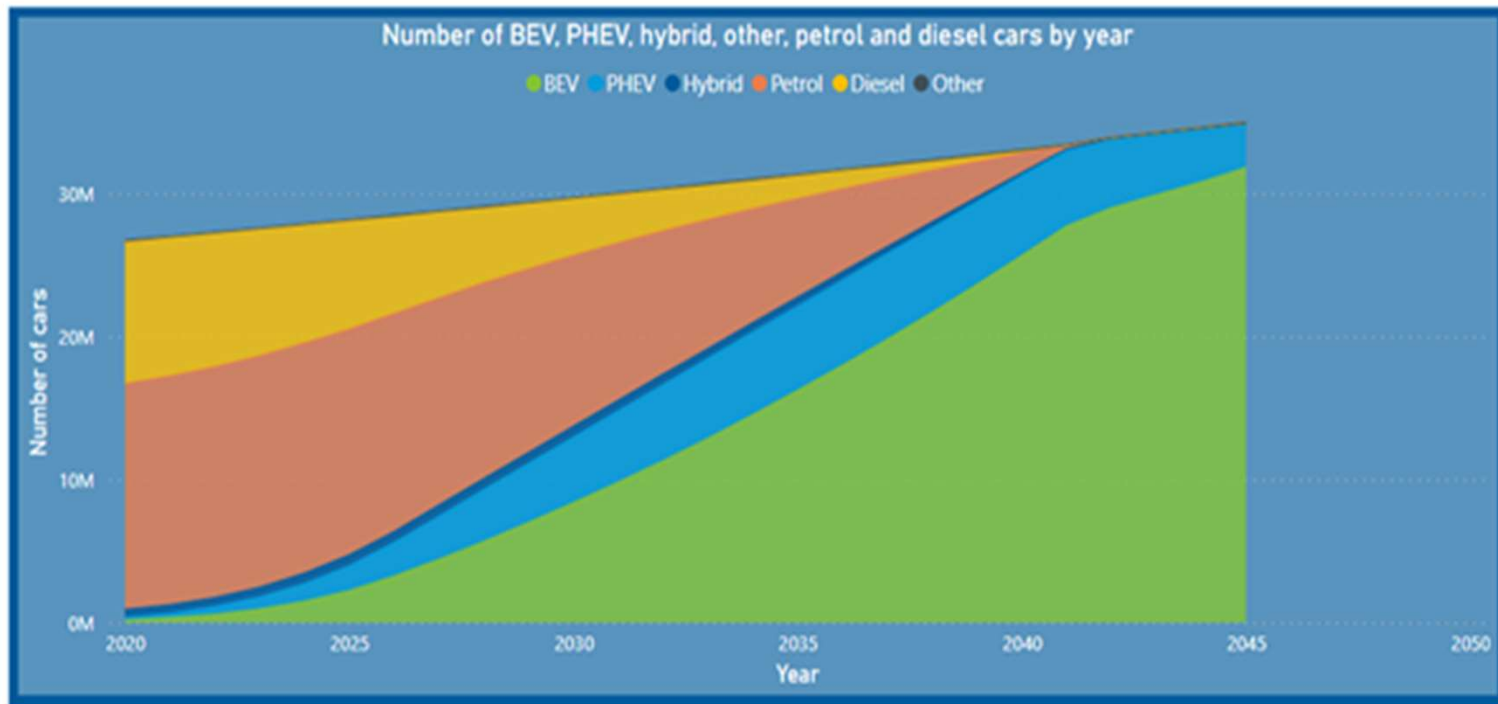
- Predicted to follow public trajectory
- Needs met through public provision
- Levelling up regional disparity
- Strategy chapter

Public charging devices per 100,000 of population by UK country and region: 1 January 2022



Predicted Trajectory of Public EV Uptake

OZEV modelling and DfT data on vehicle registrations used to forecast the likely penetration of zero tailpipe emission electric vehicles (EV) into the general fleet in England.



Conclusion

- Collaborative and holistic whole-systems approach
- Optimisation of shared resources and partnership working
- Levelling up to tackle regional disparity
- Leaning and sharing throughout the journey





The Future Is Electric: Transforming Transport for the NHS

James Bate

Senior Project Manager
South East Greener NHS
james.bate2@nhs.net



ICS Green Plans



All Integrated Care Systems (ICS) have to produce a Green Plan. Electric Vehicles are a key element within the Travel and Transport chapter.

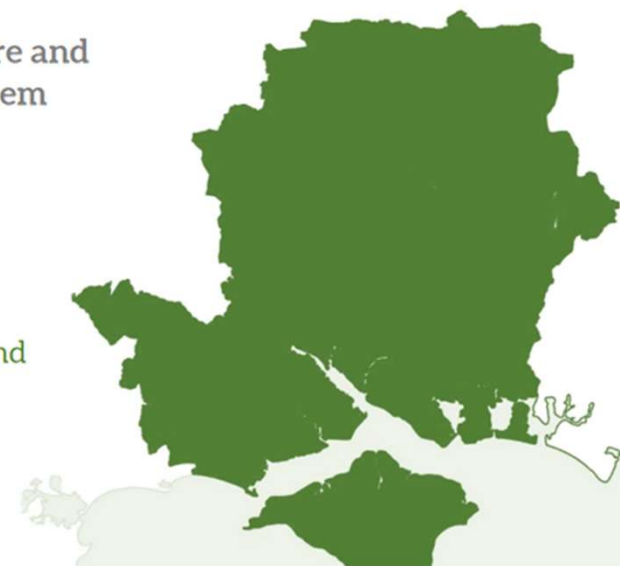
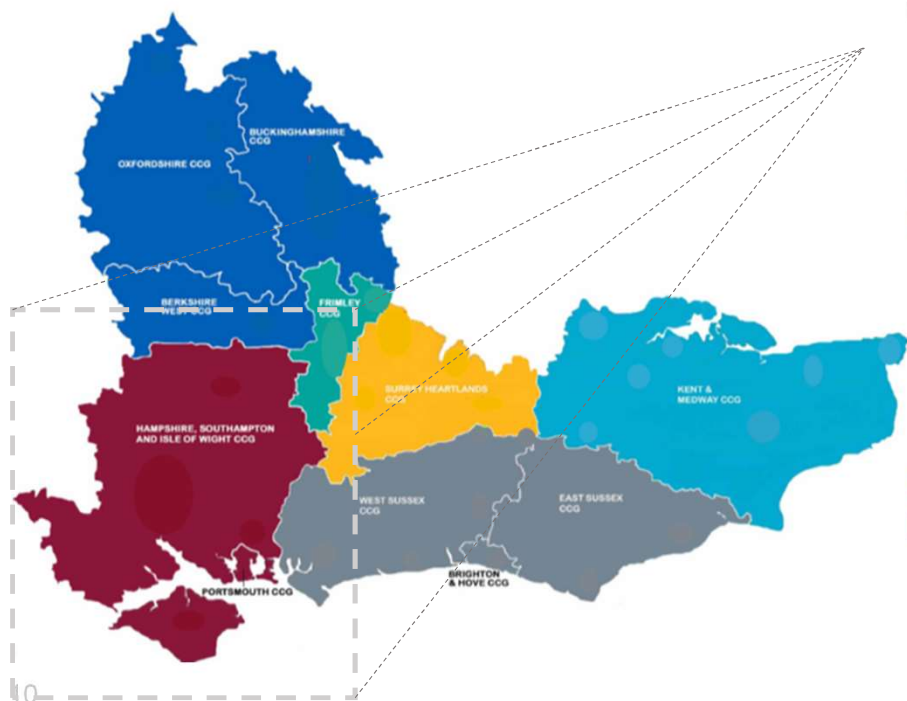


Hampshire and Isle of Wight

The Green Plan

A dynamic plan for the Hampshire and Isle of Wight Integrated Care System

Making our health and care system and population healthier and greener.





Greener NHS Fleet Return

NHS Trusts have completed a fleet return outlining the % of EVs across the fleet and presents information on the amount of EV chargers per site.

	Total number of fleet vehicles	Number of vehicles to consider rationalising	Number of vehicles to prioritise for EV	Proportion of LEVs	Proportion of ULEVs	Proportion of ZEVs
	No.	No.	No.	%	%	%
	2021/22	2021/22	2021/22	2021/22	2021/22	2021/22
Org_Name						
BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST						
EAST SUSSEX HEALTHCARE NHS TRUST	48	22	3	81%	0%	0%
QUEEN VICTORIA HOSPITAL NHS FOUNDATION TRUST	2	0	0	100%	0%	0%
SUSSEX COMMUNITY NHS FOUNDATION TRUST	329	225	7	94%	7%	4%
SUSSEX PARTNERSHIP NHS FOUNDATION TRUST	62	3	5	89%	10%	10%
UNIVERSITY HOSPITALS SUSSEX NHS FOUNDATION TRUST	87	0	0	98%	6%	6%

Org_Name	Org_Type	Region_Nam	SiteNur	SiteName	Site_Coc	Postcod	ChargerU	ChargerSize	NumberOfCharge	Reporti
SUSSEX COMMUNITY NHS FOUNDATION TRUST	COMMUNITY TRU	SOUTH EAST	1	Brighton General Hospital	RDR05	BN2 3EW	Other	Standard (7kW)	6	2021/22
UNIVERSITY HOSPITALS SUSSEX NHS FOUNDATION TRUST	ACUTE TRUST	SOUTH EAST	2	Worthing Hospital	RYR18	BN11 2DH	Fleet	Slow (<6kW)	5	2020/21
UNIVERSITY HOSPITALS SUSSEX NHS FOUNDATION TRUST	ACUTE TRUST	SOUTH EAST	2	Worthing Hospital	RYR18	BN11 2DH	Other	Slow (<6kW)	3	2021/22

Transport for South East: EV Charging Infrastructure Strategy

Key Stakeholders:

NHS England
Local Authorities
UK Power
Networks
SSEN
Arriva
Uber
BVLRA
FTA

Work Package 1 – Stakeholder Engagement (Engage with key stakeholders to establish meaningful relationships to develop and implement the strategy)

Work Package 2 – Policy & Operational Context (Establish current policy, operational trends and challenges)

Work Package 3 – Establish Baseline (Establish current levels of EV vehicle uptake, chargepoint provision and electricity supply)

Work Package 4 – Forecasting (Forecast future levels of EV vehicle uptake, charge point provision and electricity supply under different future scenarios)

Work Package 5 – Vehicle Fleet Forecasting Methodology Development
(Production of a methodology to develop forecasts of EV infrastructure demand from vehicle fleets)

Work Package 6 – Strategy Development and Action Plan (Production of an EV Infrastructure Strategy document and associated Action Plan)



THANK YOU

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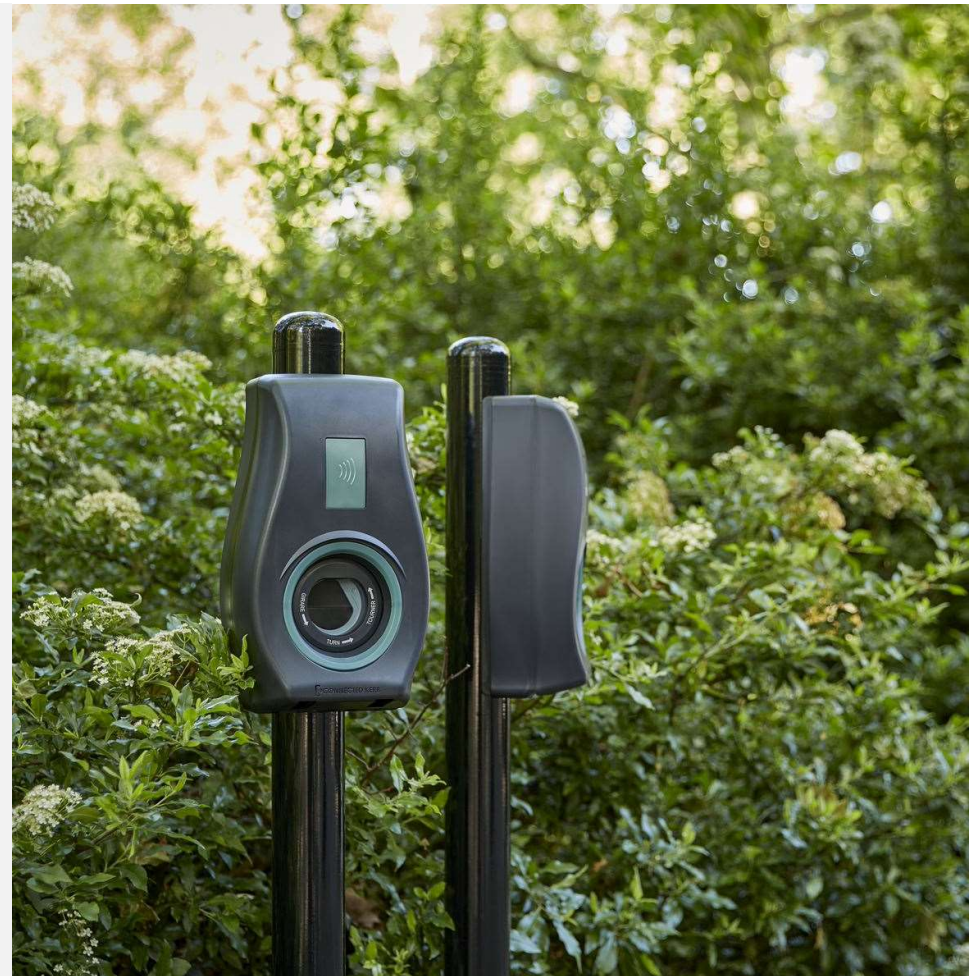




SUSTAINABLE MOBILITY FOR EVERYONE

The future is electric. We're here to make it easy.

Chris Pateman-Jones
CEO, Connected Kerb



THE BIG IDEA

WHY CHARGE UP THE NHS?

Vicki Evans , Head of Public Sector Fleet & NHS
Connected Kerb

We need sustainable mobility for
the **many not the few.**

01 **The 2030 deadline**
The ban on sales of new petrol and diesel vehicles comes into force. This project could be a blueprint for the public sector to lead the charge to a full EV transition

02 **Plenty of parking bays**
Over half a million parking bays where EV chargers could be installed.

03 **Over one million staff**
A diverse workforce with a salary sacrifice scheme that could encourage EV uptake.

04 **Energy bill subsidy**
Switching to EV would offer staff a serious subsidy in fuel bills

BACKGROUND

WHAT WE'VE LEARNT

Vicki Evans , Head of Public Sector Fleet & NHS
Connected Kerb

The days of the **gas guzzler** are
coming to an end.

01

Pressures

- Government pressure to meet strict sustainability targets.
- Estate old already using its maximum capacity.
- Power for chargers must not interrupt main supply
- Car parking spaces are at a premium
- No funding
- Match existing revenue from car parks

02

Execution Issues

- Lack of knowledge
- Conflicting stakeholder objectives
- Ageing infrastructure
- Disruption
- Parking space management

MAKING EV CHARGING WORK



OUR GROWTH

We're on a mission to become the most **accessible, affordable and reliable player in our markets.**

Utilisation: 2.7% to 4.3%.

Size: 7th to 3rd.

Sessions: 12k to 65k.

Users: 1872 to 9447.

EV Miles: 5 million!

01 **We are growing at an exponential rate**

Our network is nearly 5000 charger points, and we aim to reach 28,000 by the end of 2023.

02 **Strong record in public sector**

We have worked with local authorities across the UK to make their EV journey easier including the largest single council roll-out in West Sussex.

03 **Exceptional Customer Service**

Voted 4th out of 21 in the EV Driver Recommended Network. Chargers' rates as excellent and reliable

04 **Don't take our word for it.**

We recently secured £110 million investment from Aviva Investors which supports our plans to install 190,000 charging points before 2030.



INFRASTRUCTURE
DEPLOYMENT

STARTING POINT

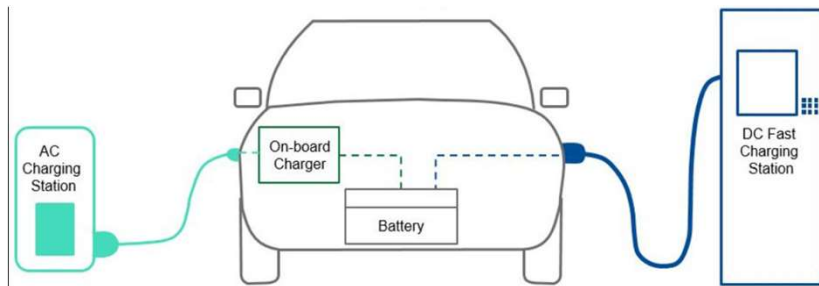


Our Support

- Access our EV Masterclasses
- Staff Awareness sessions on the benefits of charging
- Desktop feasibility study by our in-house infrastructure planner
- 30-minute virtual site tour with an expert site assessor
- On-site feasibility assessment with recommendation paper delivered by one of our project managers
- Free of charge Automated Site Assessment programme for fleet initiatives

“THERE IS MORE TO LIFE THAN INCREASING ITS SPEED”

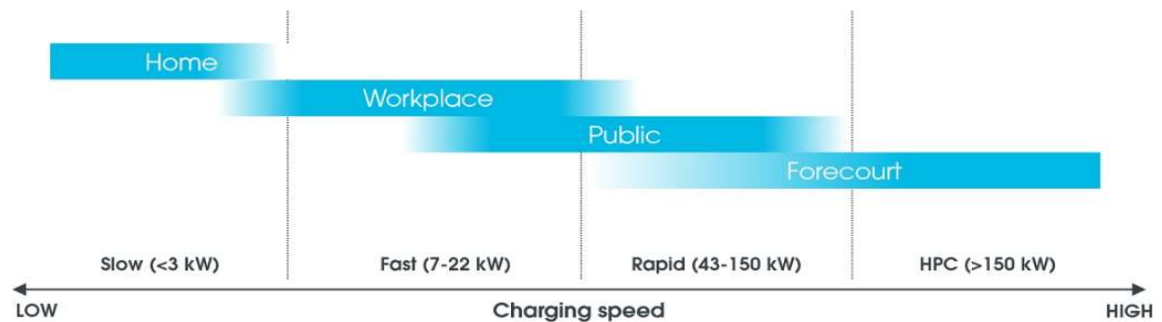
- MAHATMA GANDHI



01 **Long-dwell locations preferred**
Staff regularly park for several hours in car parks providing an ideal opportunity to charge during that time

02 **Fast charging is more complex**
The faster the charge, the more capacity required and the higher the up-front cost.

03 **Faster doesn't mean better**
Although rapids have their place, an over-reliance on them can impact battery life and durability.



THE CONNECTED KERB OFFER

- ✓ Manufactured in the UK.
- ✓ Discreet, low visual impact charging units.
- ✓ 3.5kW - 22kW smart charging, load management.
- ✓ Innovated for intensive use, robust, durable.
- ✓ Prolonged uptime, 45-minute repair/replacement.
- ✓ Easy-to-use User Interface, Mobile App & RFID payment.
- ✓ Support IoT Technologies, ultra-fast Wi-Fi, 5G, air quality, traffic & parking sensors

Power & Data Pack



- Subterranean charge point controller
- Connects to fast fibre
- Supports wireless / inductive charging
- Deployed in all scenarios

Market leading software



Open Charge Point Protocol (OCPP 1.6 / 2.0) compliant intelligent software & features:

- Mobile app for both Apple & Android
- Advanced energy management functionality
- Smart tariff, charging & booking functionality
- Contactless payment options with RFID, mobile web payments
- 24/7 customer service with remote problem solving

Gecko



- On-street residential environments
- Discreet – fits to post or bollard
- Multiple colour options
- Hardwearing and secure with double-skin

Limpet



- Multi-storey car parks & perimeter walls
- Wall-mounted, no excavation required
- Partially made from recycled tyres
- Positioned in groups of up to 10

Chameleon



- On-street residential environments
- Discreet, low impact on street appearance
- Cost effective option with dual sockets

Scarab



- **Wall-mounted for residential and commercial settings such as car parks**
- Constructed from 100% recycled plastic
- High durability
- Can be configured to 'talk' to other chargers

CHARGING SMARTER

BENEFITS OF LOAD BALANCING & LOAD MANAGEMENT:



Work within existing power capacity to save on power upgrades/reinforcements



Charging is optimised and reliable, even with limited capacity



Avoid strain on the grid and expensive tariffs



Faults can be resolved remotely, no input from drivers required



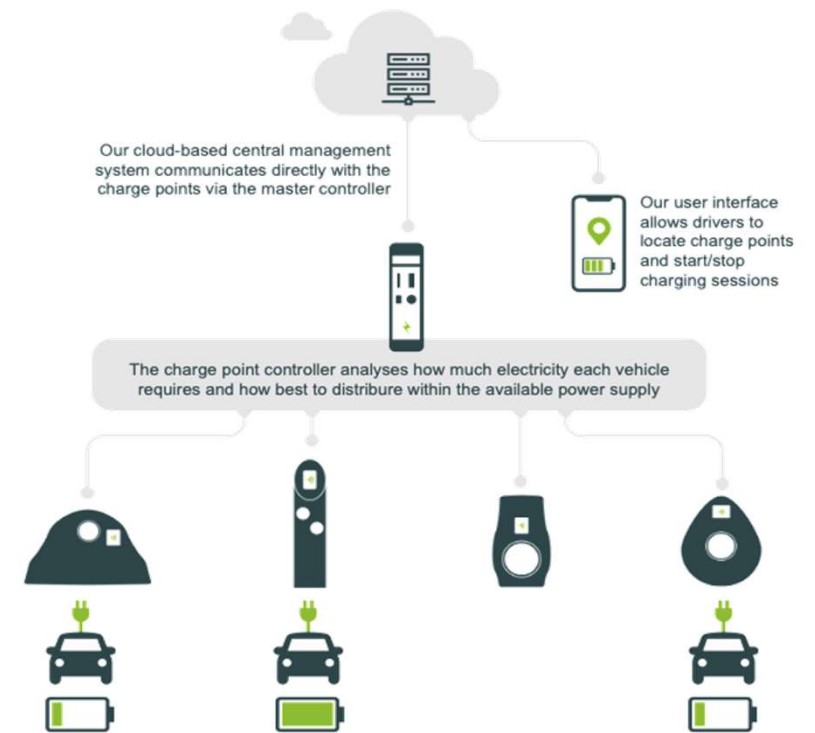
Charge points can be managed through the controller or cloud-based



Cost savings for grid operators, charge point owners and operators, and end users



Enables bespoke charging strategies, e.g. increase priority of one car over another



FLEXIBLE PRODUCTS, CONSISTENT PERFORMANCE

Separation of the socket from the charger unit delivers unparalleled flexibility:

- **Enabling:** *Installing Base Infrastructure Solution*



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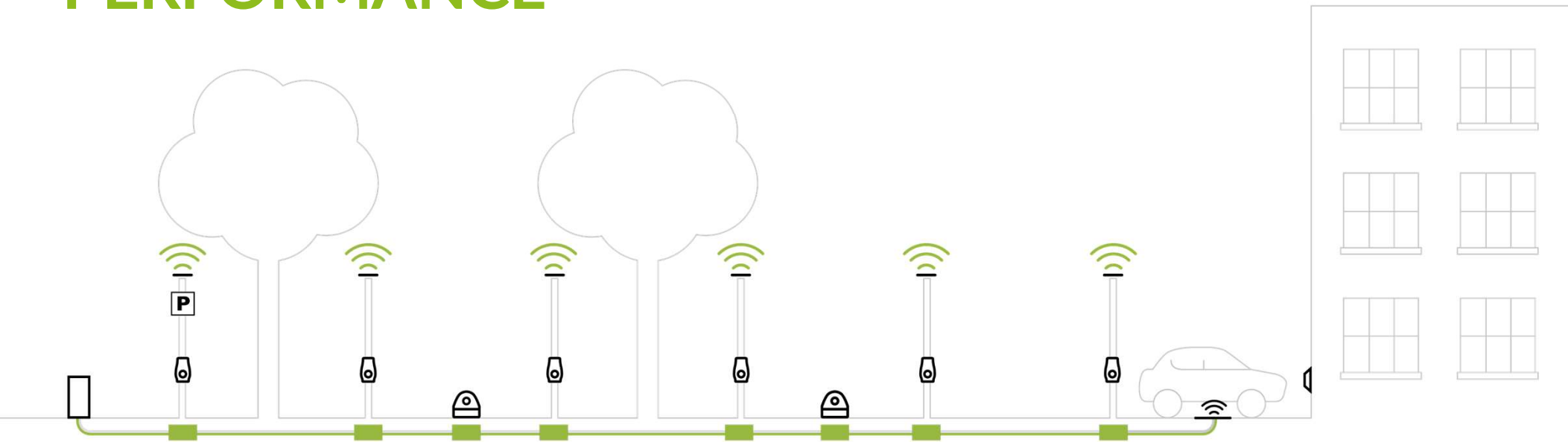
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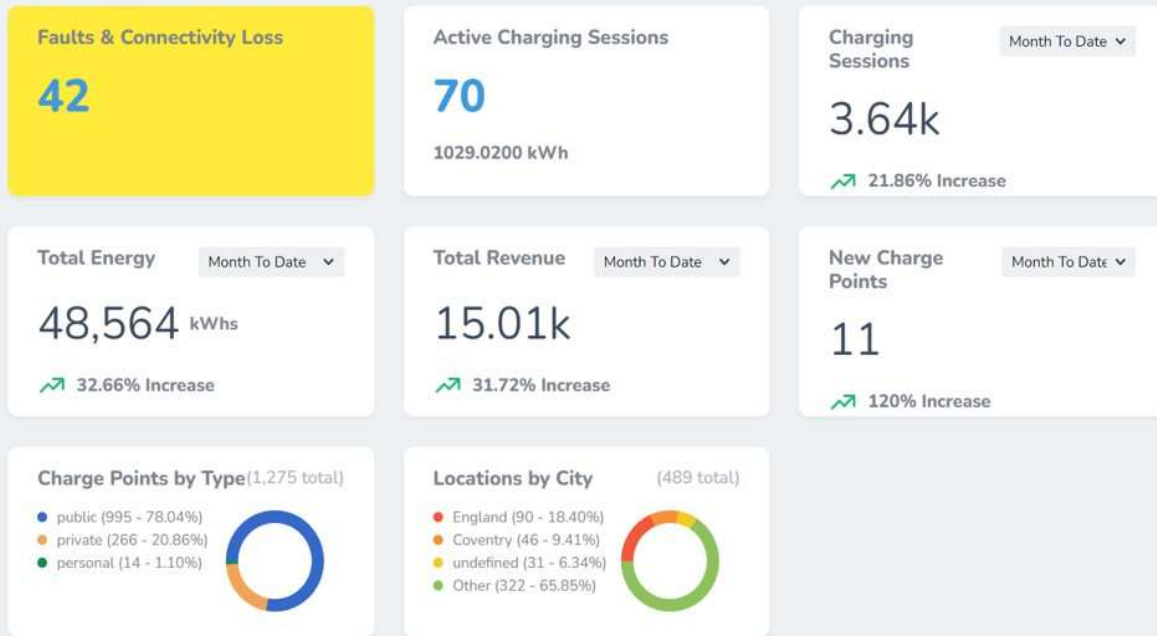
FLEXIBLE PRODUCTS, CONSISTENT PERFORMANCE

Separation of the socket from the charger unit delivers unparalleled flexibility:

- Enabling: Installing Base Infrastructure Solution
- Activating chargers: Phasing deployment of smart chargers over time
- **Connecting the community:** Adding connectivity and sensors



DEDICATED PRODUCT & SUPPORT SERVICE



Get Great Support

- Unlimited call outs / speedy response
- Dedicated project and account management team throughout lifetime of relationship
- Preventative Maintenance Programme
- 6 monthly charger review sessions to assess future requirements

Control your reporting

- Personalised reporting on usage
- CO2 savings
- Control to set your own charging rates

WHY CONNECTED KERB?



Future-proof,
flexible & scalable
infrastructure



Hassle-free, end-
to-end services



Maximise limited
grid supply



Easy reporting and
billing systems



Multiple funding
options available

AWARDS & PARTNERSHIPS



Frost & Sullivan
Best Practices

2022 Winner 



EVIES
Best Consumer Proposition

2022 Winner 



BEIS Agile Streets
Government Funded Project

Cohort Member 




SEAL Global Award
Environmental Initiative

2019 Winner 




Mayor of London
Civic Innovation Award

2018 Winner 



TechNation
Net Zero Programme

Cohort Member 



Cambridge Wireless
Most Innovative Start-Up of the Year

2020 Winner 



UN's 75th Anniversary
Sustainable Engineering Publication

Featured Partner 



Schneider Electric
Net Zero Homes Programme

2020 Winner – Ongoing 

JOIN OUR COMMUNITY

Local Government



Strategic Partners



Commercial Partners



CASE STUDY: WEST SUSSEX COUNTY COUNCIL



The largest single roll-out by a **local authority**.

01 **1000s of charging points**

Over the next decade, West Sussex will see 1000s of charging points installed across the county – a record rollout.

02 **Support residents without driveways**

60% of people in the UK are unable to charge their vehicle at home. We must ensure nobody is left behind in the transition to EVs.

03 **A real community project**

The project is a collaboration with residents and public landowners where EV users can find charging points at their local library or village hall.

04 **Fully-funded by Connected Kerb**

Our concession model means West Sussex County Council don't pay a penny for the installations.



GET IN TOUCH

Vicki Evans

Head of NHS and Public Sector Fleet

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<https://www.connectedkerb.com/meetings/vicki-evans>

THANK YOU

