

Trafford Electric Vehicle Charging Infrastructure: Update and Next Steps

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Summary

This presentation provides an update on the:

- Current position of Electric Vehicle (EV) charging within Trafford, how it has been transformed and consideration of our future approach.
- National picture and Greater Manchester Strategy.
- Status of EV within Trafford and future requirements.
- Amey proposal to provide a more equitable EV charging service.

Scrutiny Committee are recommended to:

- Note the contents of the presentation.
- Consider and provide comment on the options to enable a connection to a socket at home via a cable channel.

Introduction

- GM has set an ambitious target to become carbon neutral by 2038, 12 years ahead of the national goal. In Nov 2018 we, alongside the GMCA and GM Local Authorities declared a Climate Emergency in recognition of the urgent action needed.
- An increase of Electromobility, alongside a reduction in private car use, is important to GM's ability to reduce transport emissions.
- A key strategy to decarbonise transport is to promote the switch to EVs and the deployment of electric charge points (ECPs) across the region.
- Mass adoption of EV and other low emission vehicles, with lower running costs could lead to an unsustainable increase in private vehicle mileage, impacting on levels of traffic congestion and pollution¹.
- We've been working hard to improve air quality for our residents and visitors to Trafford through expanding our ECPs and delivering upon our other corporate commitments in response to the climate change emergency such as leading active travel projects.

(1) - Electric Vehicle Charging Infrastructure Framework, TfN (October 2022)

EV uptake

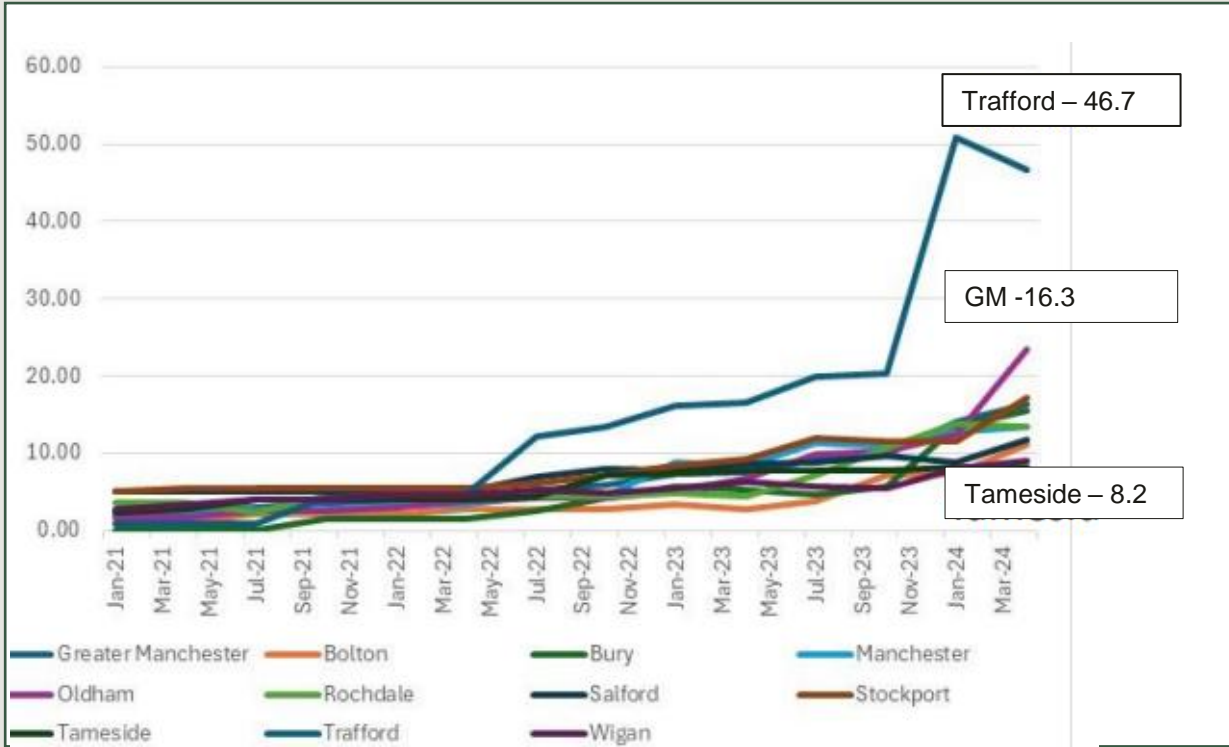
Transport for the North (TfN) report that:

- Parking and charging availability is a key barrier to an equitable sharing of benefits of EV's.
- EV ownership is significantly lower among those without access to off-street parking.
- Tackling on-street charging is key for the levelling up of access to EVs and the need to charge vehicles.
- As the 2nd hand market grows and more people and families without off-road parking acquire EVs, this will result in an increase in the proportion of EVs with no access to home charging, and so more reliance on public charging infrastructure.

Tariffs for charging electric vehicles

- The cheapest and easiest way to refuel an EV is at home.
- The impact of not having off-street charging capability is further compounded by the tariffs faced by those without driveways to park and charge.
- People in areas without this access to home charging will need to seek publicly available or commercial chargers which carry a higher charging tariff currently.
- Those without driveways will not benefit from discounted or free parking.
- For those without off-street parking, such as flats or terraced houses, charging can be both less convenient and costlier than for those who have access to off-street parking (£0.07-£0.10 compared with £0.60 + kWh)

Rapid chargers per 100k population



Chargers / 100,000	Manchester	13.5	Stockport	17.3	
GM	16.3	Oldham	23.6	Tameside	8.2
Bolton	11.2	Rochdale	13.4	Trafford	46.7
Bury	15.5	Salford	11.8	Wigan	9.1

Our progress

The increase over the last 3 years has been the result of us:

- Prioritising the installation of ECP's in publicly owned car parks via council capital funding.
- Working with a private operator, Be.EV, to attract their investment in facilities across anticipated areas of high demand.
- Working with TfGM to develop and deliver the GM EV Strategy.

Current activity

- Exploring new funding / investment opportunities to enable a more equitable distribution of EVCPs
 - This could include the installation of on-street gully / cable channel installation.

Electric mobility – future demand

- Population of 235,000 (248,000 predicated by 2030).
- Number of Households (2021) – 96,300 of which 40,000 are terraced or flats.
- Estimated 28% of households do not have off street parking.
- Current EVCI distribution is predominantly destination charging along major trunk roads and does not meet the needs of local residents.
- Demand for equitable and accessible public on street charging solutions is set to increase significantly over the next 5 years.
- We manage 4,700 on street public parking spaces across the borough.

Our considerations

- Installation of chargers need to align with current assets with the opportunity for on column solutions across the current 30,000 street lighting columns where practicable.
- Future ambitions of TfGM and Trafford for transport and decarbonisation align with the delivery of holistic EVCI across the borough.

Electric mobility – future demand

A predicted 24,670 - £29,440 EV's vehicles on Trafford roads by 2030.

Amey identify a 2030 required for 900* EV chargers compared with 869 and 1,034 depending on data used.

Market growth is further strengthened by:

- Zero Emission Vehicles Mandate
- Manufacturer commitments - manufacturers largely committed to 2030 EV only manufacturing target.
- Financial incentives - consumers also being supported by grants for small and large vans (up to £5k) and £350 discounts for home charge points.

EV Uptake	EV uptake UK Govt - BAU	EVCP's required for BAU	EV uptake TfN - Just About Managing	EVCP's required - Just About Managing
2025	4,731	317	4,890	342
2030	12,424	869	13,740	1,034
2035	24,670	1,424	29,440	1,887
2040	38,044	1,769	49,860	2,566

Above: Source - TfN EVCI Framework

Charger type	Quantity
Slow	232
Fast	159
Rapid	308
Ultra rapid	13
Total	712

Above: Source – Amey projections

*Delivery model based on 712 chargers (80%), remaining 20% potentially through private land agreements.

Amey proposal and characteristics



EV enabling infrastructure
e.g. gullies



Existing street furniture
chargers e.g. street lighting
columns



Stand alone on street
charging solutions e.g. fast /
rapid chargers



Charging hubs at strategic
locations e.g. rapid and ultra
rapid charge points including
community hubs

- **Hardware agnostic** with a fully integrated back-office platform.
- **All charging types** including **enabling infrastructure**
- **15 year contract term**
- A blend of chargers modelled on demand analysis, through inhouse **Intelligent Mobility Team**
- 4 year roll out programme
- **Asset renewal** programme
- **Local teams** delivering installation, operations and maintenance teams
- **24/7 customer support** and multiple payment options
- **Variable tariffs** based on charger type, location and time of charging.
- 10% **revenue share** back to Trafford
- Total estimated **investment required £16.5m**
- LEVI (£1.4m), CRSTS (£500k) and other **funding integrated** to deliver the less economically viable but strategic required locations
- **Amey investment** used to deliver all other locations and grow the network
- High yielding EVCP **supports those less economically viable locations**

Cable channels / Gully's



Photo credit: Energy Saving Trust 2024

About

- Enables EV owners with no off street parking to charge vehicles from their mains power (access to lower tariffs)
- Predominantly installed within a public footpath owned and maintained by a local authority
- No known installs in Trafford. No overarching GM approach yet developed.
- Uncertainty around the use with any property that fronts directly onto the footway.

Characteristics include

- Designed to sit flush to the pavement – removing a trip hazard. However, cables could still be placed in dangerous locations.
- They potentially reduce on street EV infrastructure spend for LA's.
- EV owners will be responsible for maintenance
- Reliant on good will / arrangement with neighbours not to park within the 'cable reach zone'.
- Estimated supply and install costs @ approx. £1K - £3k +VAT.
- Residents will still require a home chargepoint (<£1k), considerations for resident on 'payback time'.
- Users can choose own tariff and supplier

Ask

- Consider the types of high street charging infrastructure.
- Request a further report on the use of gully infrastructure by spring 2024.

Conclusion and recommendations

- EV ownership is forecast to increase. EV charging infrastructure is required to meet the future demand and contribute to future uptake.
- We've worked hard to increase our EV charging offer and to provide alternatives to car use through active travel and supporting public transport uptake.
- Our partnership with BE.EV has led to an increase in more charging bays in areas of high demand (more commercially viable sites, with us receiving revenue share).
- Investment is required in areas not considered by BE.EV or another operator e.g. more complex on street locations.
- Amey have proposed an offer to trial on street and hub locations – required in Trafford.
- The proposal includes enabling infrastructure including 'gully' installs to allow residents to run an EV cable under street level subject to further investigation and agreement (no overarching GM approach exists).
- Upon any successful receipt of LEVI funding we would undertake a programme to roll out around 310 EV chargers. The remainder would require private funding.

Conclusion - continued

Scrutiny Committee are recommended to:

- Note the contents of the presentation.
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Appendix

- Publicly accessible devices, home chargers & vehicles
- BE.EV locations
- Vehicle type glossary

References

- GM EV Strategy meeting slides (TfGM, September 2024).
- Electric Vehicle Charging Infrastructure framework (TfN, October 2022)

Publicly accessible devices, home chargers & vehicles

The table below sets out the number of publicly available charging in GM, the numbers of home chargers, and Electric Vehicles within private keepership and that are company registered by Authority (source – TfGM)

	Charge Points								Battery Electric Vehicles		
	Publicly Available Devices							Home Chargers	Car Private Keepership	Car Company Registered	Light Goods Vehicles
Authority	Locations	Devices	Connectors	Ultra	Rapid	Fast	Slow				
Bolton	28	71	116	8	19	27	17	1,112	1,082	662	32
Bury	34	58	117	19	14	12	13	974	866	746	43
Manchester	98	400	557	54	27	79	240	1,173	1,240	2,237	275
Oldham	48	110	190	34	31	18	27	652	741	501	32
Rochdale	28	67	140	9	25	18	15	750	802	478	67
Salford	60	141	258	10	24	53	54	820	827	567	112
Stockport	40	86	169	13	44	14	15	1,999	1,715	81,656	3829 ⁴
Tameside	26	47	93	8	15	11	13	769	704	394	38
Trafford	54	218	347	89	49	29	51	1,895	1,644	882	47
Wigan	41	127	189	16	36	41	34	1,394	1,356	569	43
Total	457	1325	2176	260	284	302	479	11,538	10,988	88,694	4518

¹ DfT Statistics end Q4 2023

² Data supplied by TfN/Zap Map July 2024 data

³ Supplied by ENW April 2024

⁴ In Q2 2020 a national leasing company began registering vehicles to a postcode in the Stockport Council area.

BE.EV Trafford locations

Location	No. Bays
Longford Park Car Park	2
James Street	4
Greenbank Road Car Park	4
Trafford Town Hall	4
Balmoral Road Car Park	4
Flixton Road Car Park	6
Cecil Road Car Park	8
Golden Hill	12
Sale Water Park	16
Total	60

Type	Characteristics
Battery Electric Vehicles (BEVs)	Powered solely by an electric motor/battery. Charged from an external source of electric power. No emissions from vehicle.
Plug-in Hybrid Electric Vehicles (PHEVs)	Equipped with both a petrol or diesel engine, as well as a battery that can be charged up by plugging in. They can be driven from either power source, and only 'zero emissions' when driven in electric-only mode.
Hybrid Electric Vehicles (HEVs)	Similar to PHEVs, but the electric motor/battery is smaller and charged by braking/cruising - it can't be plugged in and charged. They're sometimes referred to as 'self-charging hybrids' for this reason. These cars have very limited 'zero emissions' electric-only modes.