

Unblocking Obstacles to Fleet Electrification



steer



Transport for the South East



The Sub-national Transport Body for the South East of England
representing 16 Local Transport Authorities

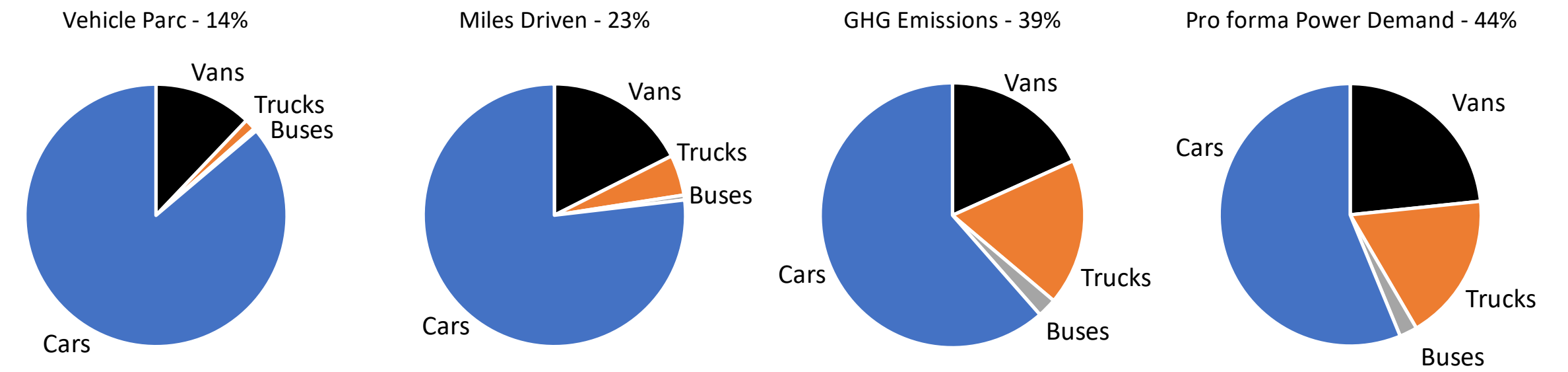
“Our purpose is to determine what investment is needed to transform our region’s transport system and drive economic growth”

- 8.3 million residents
- 300,000 businesses
- Nearly 1 million vans, trucks, buses and taxis



Electrification of Commercial Vehicles Matters

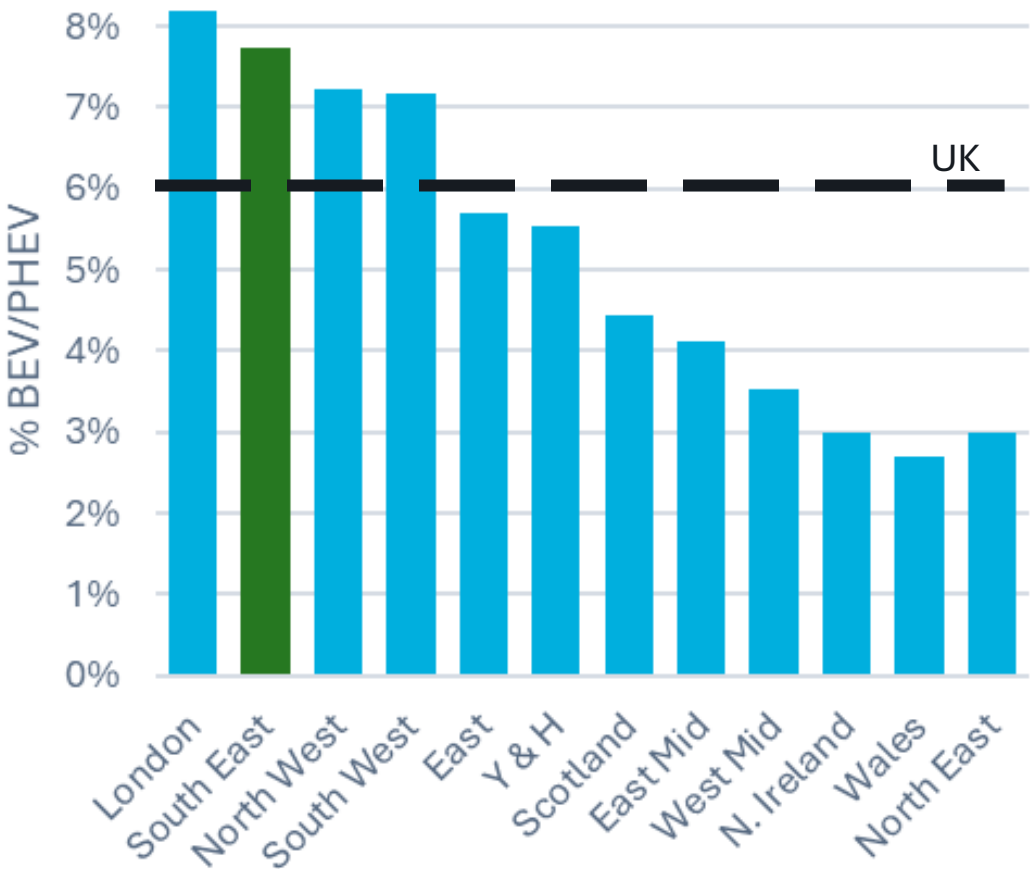
Commercial vehicles occupy a larger share of miles driven, GHGs emitted and kWhs consumed pro forma.



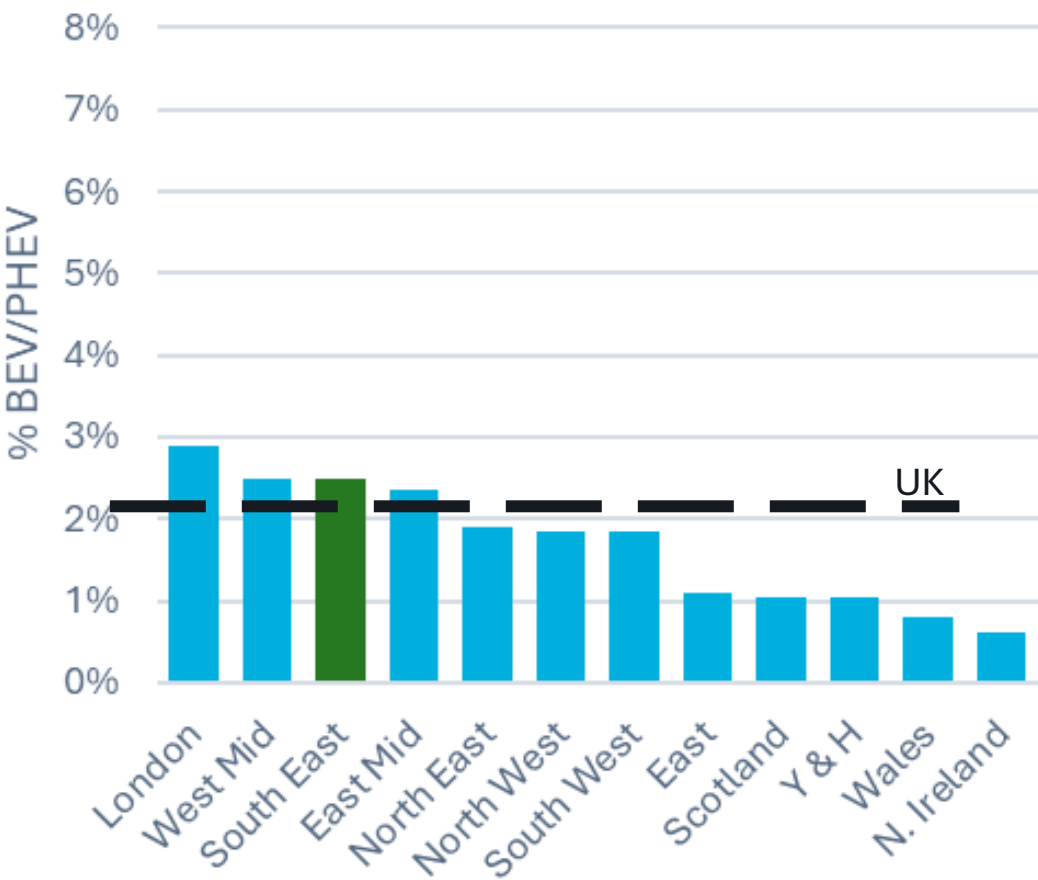
Derived from tables VEH0150, TRA0101 and ENV0201a

BEV/PHEV Adoption - 2024

Cars



Vans



Derived from VEH 0105 and 0142

Forecast Results – TfSE Headlines

2030



- 130,000 eVans across TfSE
- Most populous: Kent, Surrey, Hampshire, West Sussex
- 2,220 GWh of energy demand, 932 GWh from publicly accessible resources



- Almost 1,000 eBuses across TfSE (c. 20% penetration)
- Most populous: Brighton and Hove, West Berkshire, Crawley (West Sussex), Fareham (Hampshire)
- 76 GWh of energy demand



- Over 5,000 electric Taxis and PHVs across TfSE (c. 20% penetration)
- 90 GWh of energy demand, 42 GWh from publicly accessible resources

When 100% fleet electrification

Based on some rational assumptions around charging channels by vehicle class:

- Public Charging may approach 50% of total energy demand
- Commercial vehicles may exceed 50% of public charging, with focus on rapid charging

Vehicle Class	Buses &					Total
	Cars	Taxi & PHV	Vans	Trucks	Coaches	
Estimated Share of Demand	54%	2%	23%	18%	2%	
	% of Class					
Residential	60%	15%	10%			35%
Depot & Workplace	10%		20%	50%	100%	21%
Public On-street	15%	15%	10%			11%
Public En Route	15%	70%	60%	50%	0%	33%
Total	100%	100%	100%	100%	100%	100%

Derived from VEH0105, TRA0101 and ENV0201a

LGV Waterfall - concentration of newer vehicles in company registered

	2024		
Total UK LGVs	Company	Private	Total
Beginning Parc <i>share</i>	2,260 49%	2,372 51%	4,633 100%
Additions <i>share</i>	337 93%	26 7%	363 100%
Transfers Scrappage	-307	307 -282	-282
Ending Parc <i>share</i>	2,290 49%	2,424 51%	4,714 100%
e-LGVs	Company	Private	Total
Beginning Parc <i>share</i>	62 94%	4 6%	66 100%
Additions <i>share</i> <i>% of Total LGVs</i>	24 98% 7%	0 2% 2%	24 100% 7%
Transfers Scrappage	-4	4 -2	-2
Ending Parc <i>share</i> <i>% of Total LGVs</i>	81 93% 4%	6 7% 0%	88 100% 2%

2024 reflects a long-term trend in which:

- While total LGV fleet is evenly divided between:
 - 49% Company registered – large and medium fleet owner/operators and leasing
 - 51% Private – Small and often un-incorporated commercials
- Nearly all new registrations (93%) go to Company fleets
 - Indicating 7-year hold in Company fleets
 - Then transferred as used into the Private fleet for the remainder of their useful lives

Newer vehicles concentrate in the Company registered fleet

- e-LGVs further demonstrate that concentration in Company registered fleet

Derived from VEH 0105, 1154 and 1153

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LGV Waterfall

	2024			6 years ending 2030		
	Company	Private	Total	Company	Private	Total
Total UK LGVs						
Beginning Parc	2,260	2,372	4,633	2,290	2,424	4,714
share	49%	51%	100%	49%	51%	100%
Additions	337	26	363	2,492	188	2,679
share	93%	7%	100%	93%	7%	100%
Transfers	-307	307		-2,021	2,021	
Scrappage		-282	-282		-1,798	-1,798
Ending Parc	2,290	2,424	4,714	2,761	2,834	5,595
share	49%	51%	100%	49%	51%	100%
e-LGVs						
Beginning Parc	62	4	66	81	6	88
share	94%	6%	100%	93%	7%	100%
Additions	24	0	24	1,053	18	1,071
share	98%	2%	100%	98%	2%	100%
% of Total LGVs	7%	2%	7%	42%	10%	40%
Transfers	-4	4		-176	176	
Scrappage		-2	-2		-65	-65
Ending Parc	81	6	88	959	135	1,094
share	93%	7%	100%	88%	12%	100%
% of Total LGVs	4%	0%	2%	35%	5%	20%

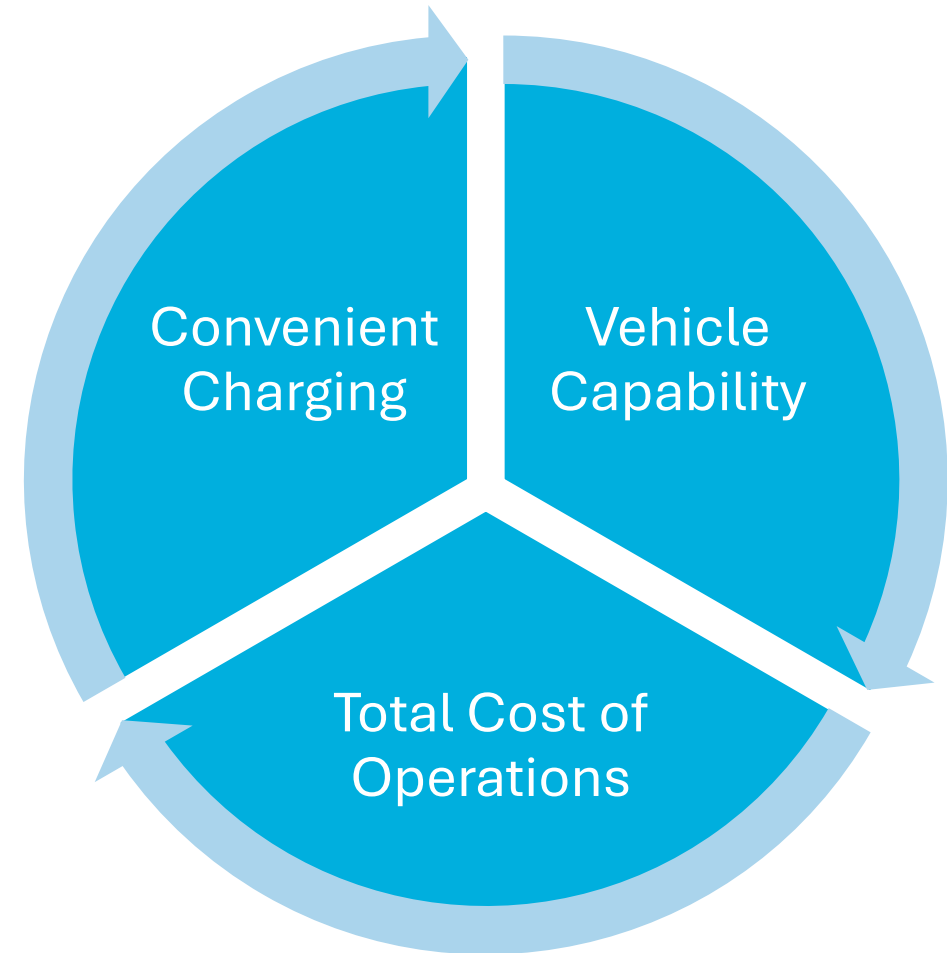
By 2030 e-LGVs will concentrate in Company registered fleets

- When rolled forward to 2030 under ZEV Mandate:
 - 88% of over 1 million eLGV will be in company registration and
 - eLGV will represent 35% of company registered LGVs
- Focus of fleet electrification must be on company registered LGVs for the next several years

Fleet Managers' Dilemma

Can't Electrify Fleet Until:

<u>Capability</u>	Available EV choices suit vehicle duty cycles
<u>Cost</u>	Total Cost of Operations doesn't cause a permanent uptick in transportation cost
<u>Charging</u>	Energy cost-effectively available where and when needed



Case Study - Slough

Economy

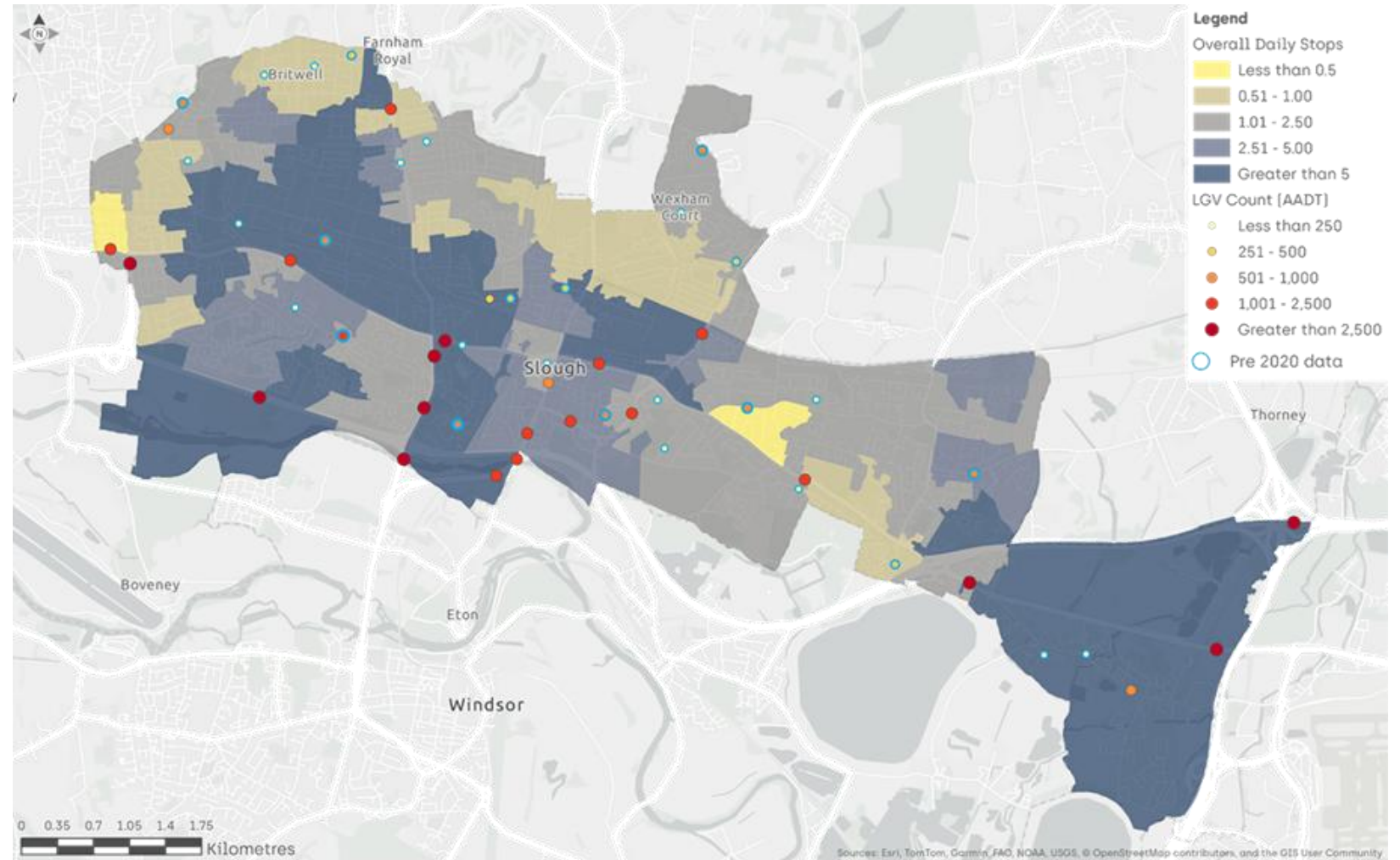
- **15,000 companies**
 - SEGRO estate
 - Logistics
 - Pharmaceuticals
 - Heathrow-adjacent

Census

- **52,000 households**
- **140,000 population**
- **160,000 employees**

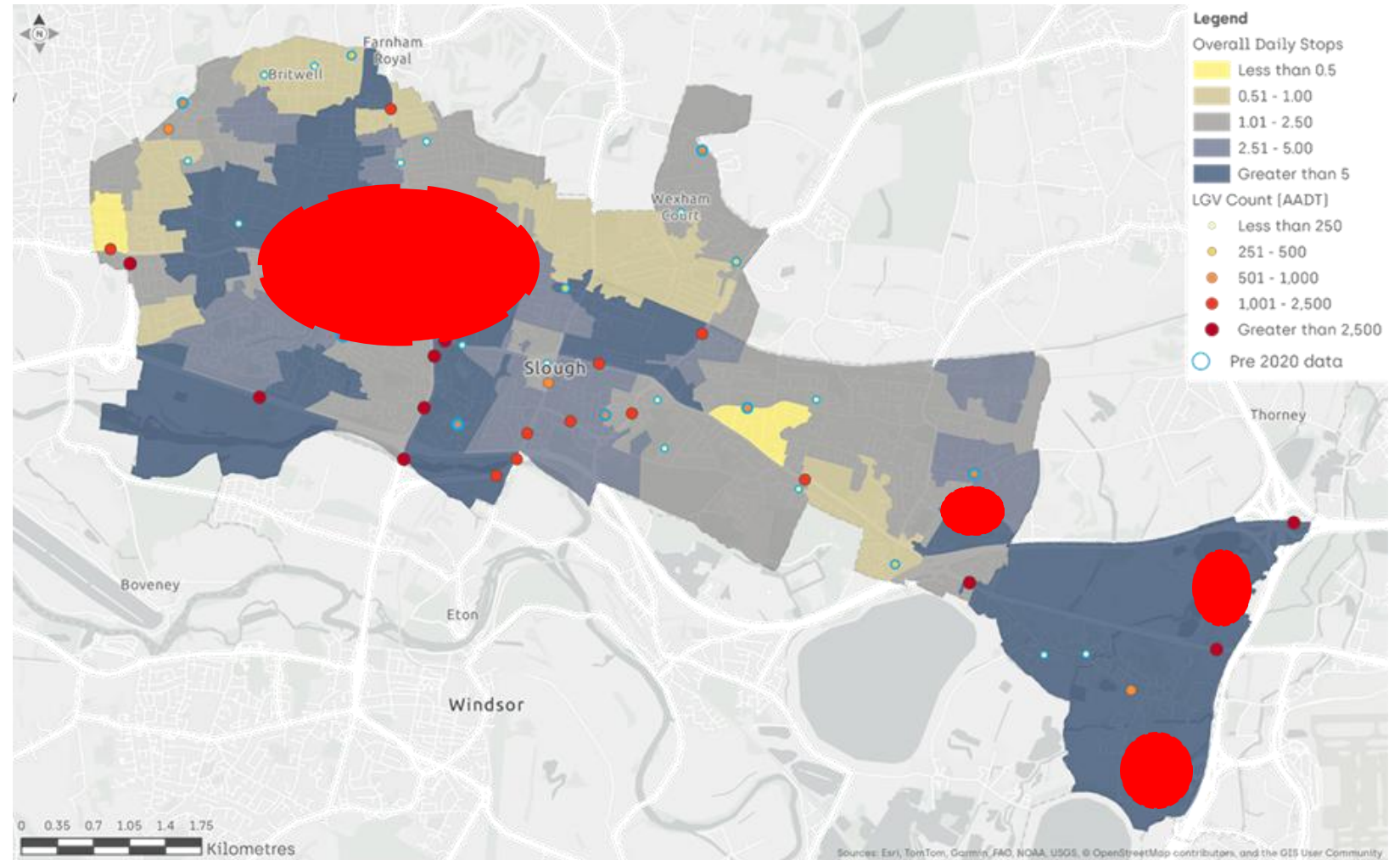
Parc

- **13,000 Vans**
- **450 taxi and PHV**



Case Study - Slough

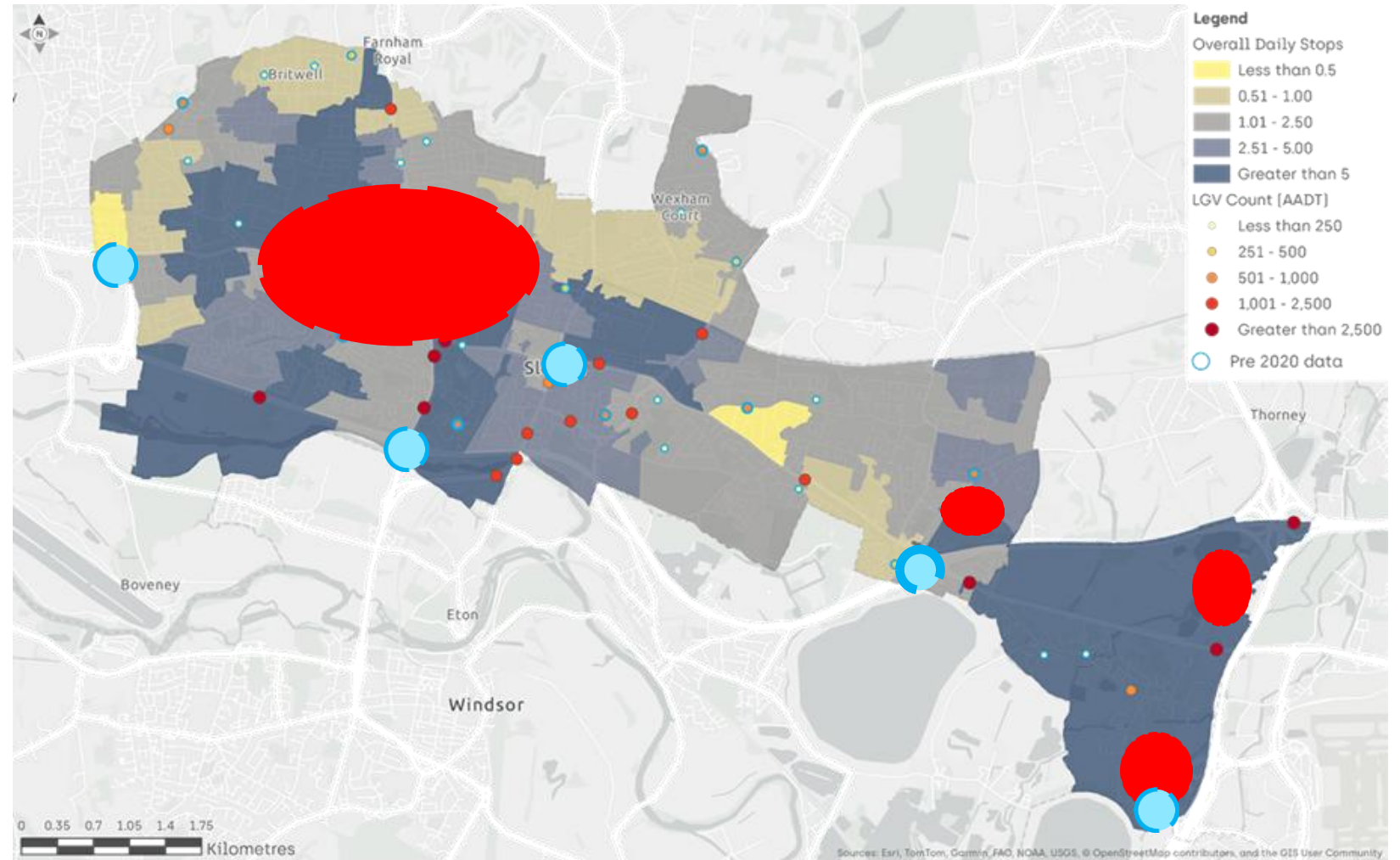
Depot **Dedicated Charging Infrastructure with potential for 3rd party access**



Case Study - Slough

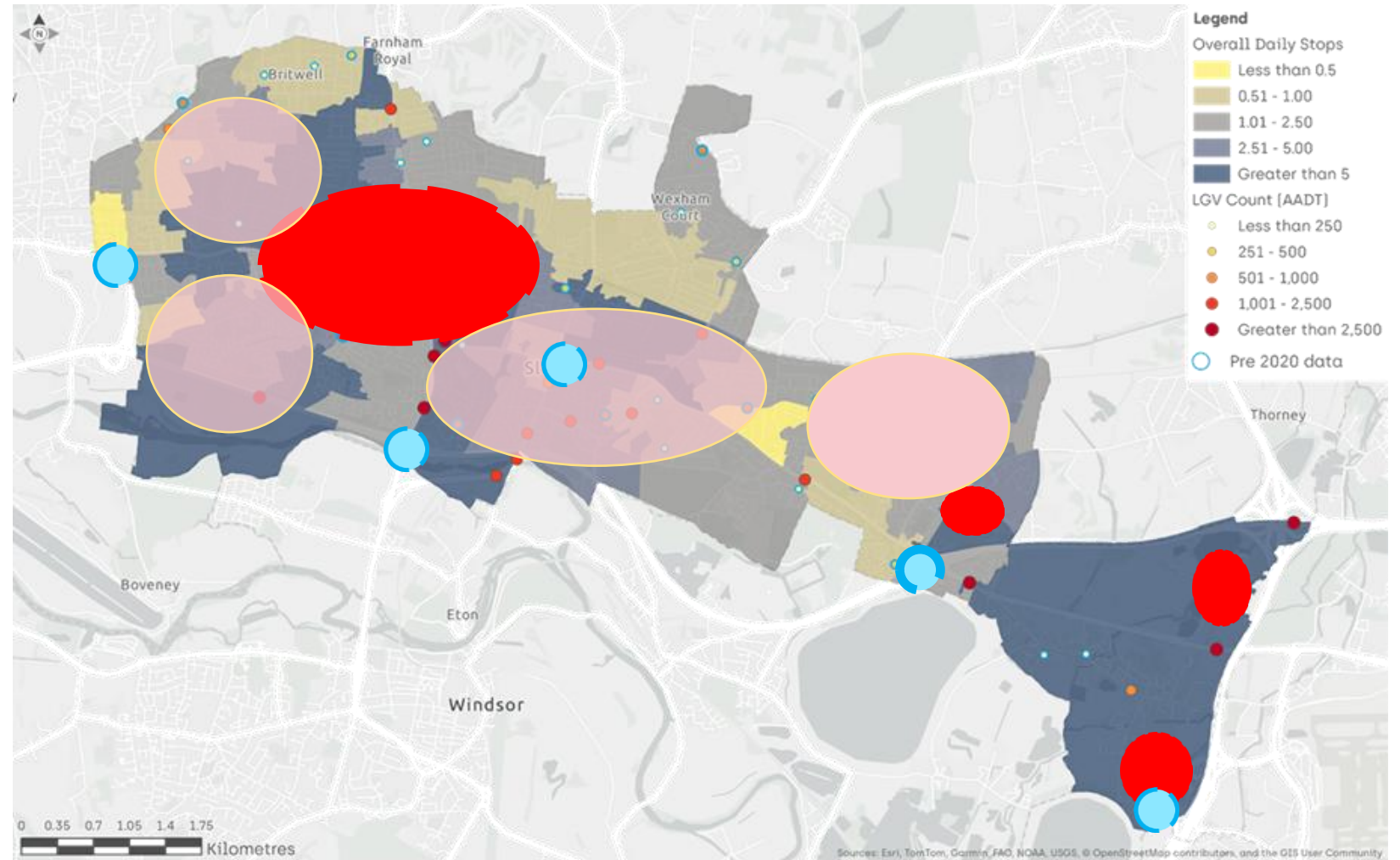
Depot **Dedicated Charging Infrastructure with potential for 3rd party access**

En Route **Retail access, but serving committed fleet customers**



Case Study – Slough

- Depot** **Dedicated Charging Infrastructure with potential for 3rd party access**
- En Route** **Retail access, but serving committed fleet customers**
- Public** **On-street over-night service to at-home drivers**



Thank you



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