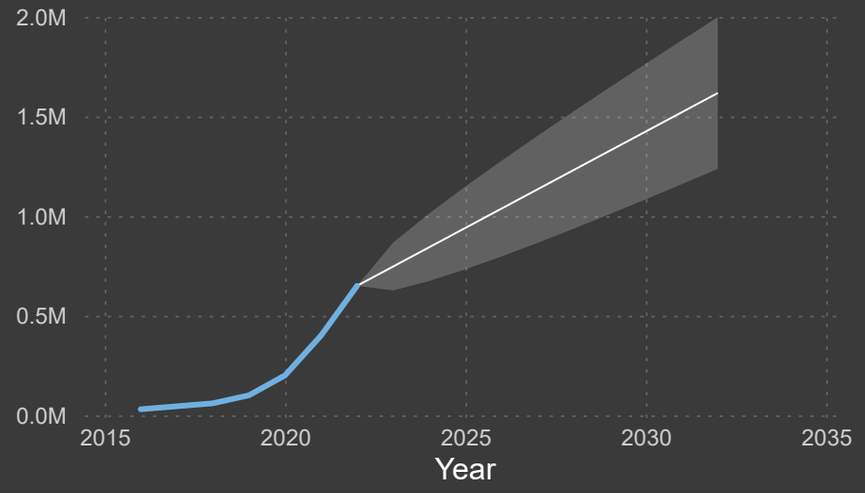
Understanding The EV Charger Market Potential for PikaSpark

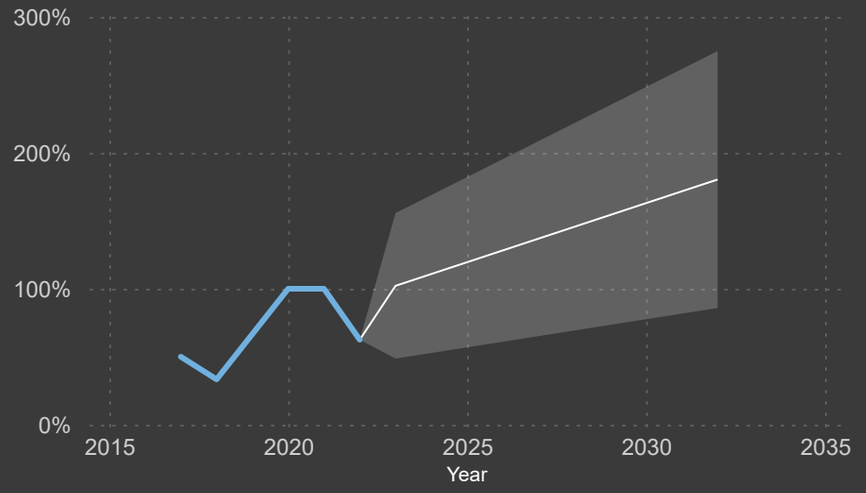
Navigate to

Traffic and Competitor Data

Number of Electric Vehicles by Year



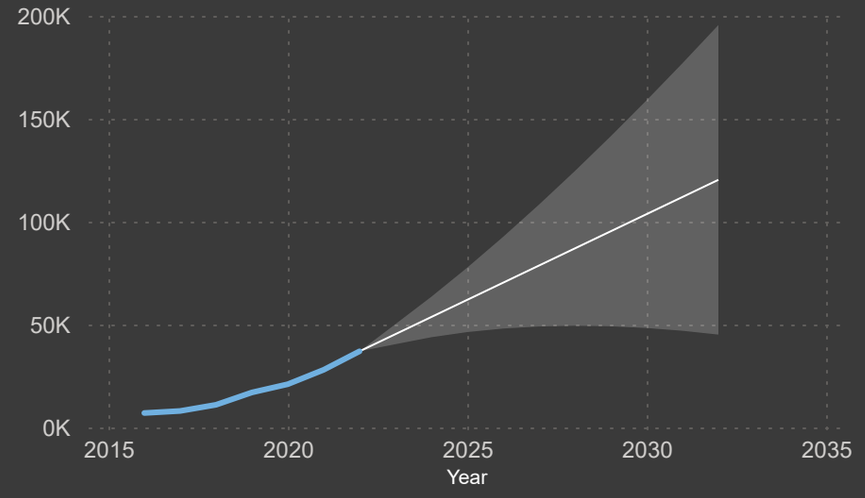
EV Ownership Growth Rate by Year



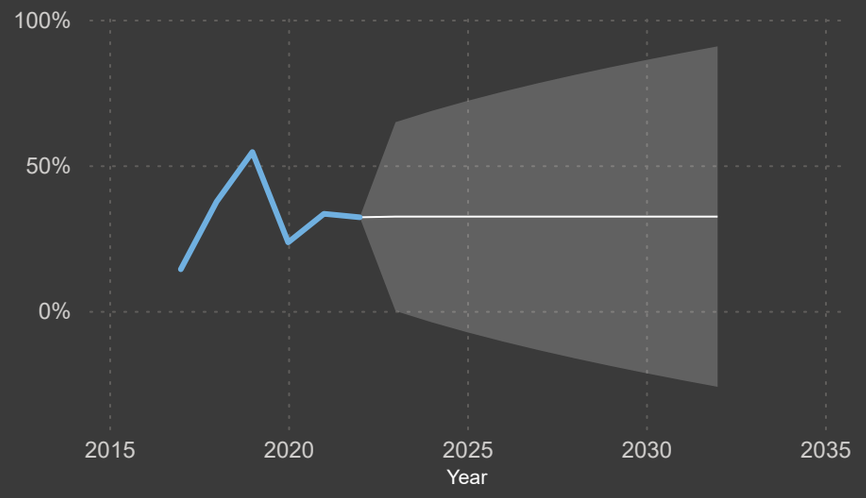
Projected Growth Rate EV Ownership

68.75%

Number of Public EV Charge Points by Year



Public EV Charge Points Growth Rate by Year



Projected Growth in Number of Public EV Charge Points

32.56%

Top Roads to Invest In

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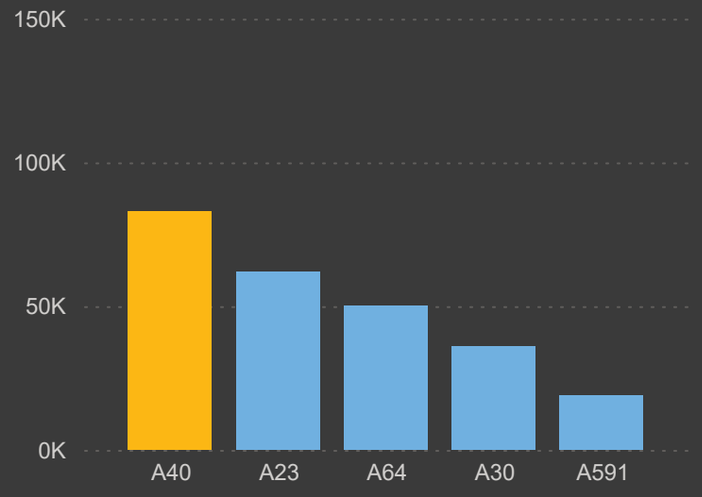
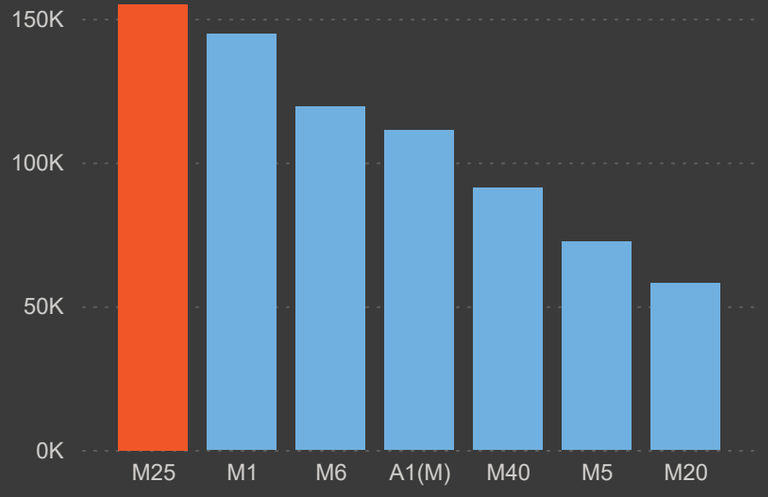
Number of Vehicles per Day: Holiday Roads



Number of Vehicles per Day: Motorways



Road Type	Number of Vehicles Each Day	Average of What % are EVs	EV Traffic Per Day	EV Traffic Per Year	EV Traffic Charging Market	EV Charging Profit Available	Annual Additional Income	Total Profit
Holiday Road								
A23	62,000	0.010%	6	2,263	89,388.50	6,793.53	£470,000	476,793.53
A30	36,000	0.010%	4	1,314	51,903.00	3,944.63	£470,000	473,944.63
A40	83,000	0.010%	8	3,030	119,665.25	9,094.56	£470,000	479,094.56
A591	19,000	0.010%	2	694	27,393.25	2,081.89	£470,000	472,081.89
A64	50,000	0.010%	5	1,825	72,087.50	5,478.65	£470,000	475,478.65
Motorway								
A1(M)	111,250	0.008%	9	3,249	128,315.75	9,752.00	£470,000	479,752.00
M1	144,750	0.008%	12	4,227	166,954.65	12,688.55	£470,000	482,688.55
M20	58,000	0.008%	5	1,694	66,897.20	5,084.19	£470,000	475,084.19
M25	155,000	0.008%	12	4,526	178,777.00	13,587.05	£470,000	483,587.05
M40	91,000	0.008%	7	2,657	104,959.40	7,976.91	£470,000	477,976.91
M5	72,250	0.008%	6	2,110	83,333.15	6,333.32	£470,000	476,333.32
M6	119,500	0.008%	10	3,489	137,831.30	10,475.18	£470,000	480,475.18

Assumptions

- Traffic per day represents what we can expect to have on any point on the road.
- Percentage of vehicles that are EV is correct.
- Annual additional income is constant regardless of location, and other factors that affect customer spend in shop and other amenities. For example
- number of passengers per car
- customer behaviour and motivations, i.e. average spend of holiday vs motorway customers.

Summary

Based on market share and profitability data:

Top Holiday Road

A40

8 Cars per day

Top Motorway

M25

12 Cars per day

Number of Chargers

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Based on market share and profitability data

Minimum number of chargers per forecourt (start of year 1) = 1

Maximum number of chargers per forecourt (start of year 1) = 2

Taking projected 68.75% growth in EV ownership into account gives

Minimum number of chargers for forecourt (start of year 6) = 13

Maximum number of chargers for forecourt (start of year 6) = 28

However

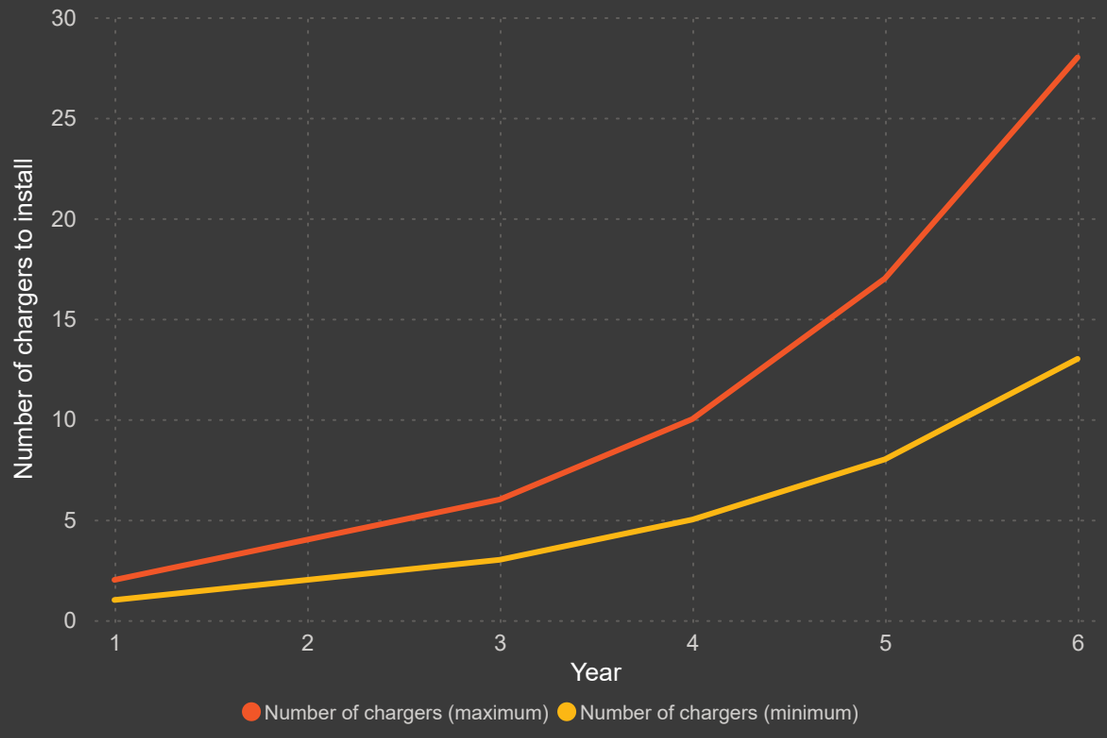
- EV charging technology is changing rapidly meaning increased ability for owners to charge at home and likelihood of faster charging technology in coming years.
- As the number of EV vehicles owned rises, so does the number of public EV charge points (competition).
- Our model assumes projected growth in EV sector will continue at a steady rate. Many factors we haven't been able to consider may mean this is not the case!
- Typical maximum number of chargers installed by current competitors is 5 chargers, although this may be alongside other fuel options or amenities.

Reduce risk, add resilience

- Plan for two phase project. Install charge points to meet demand up to year 3 or 4 then re-evaluate demand and technology available.
- Partner with existing companies for destination charging and lower capital expenditure.
- Use further data sets to better understand market and obtain more accurate projections.

Number of chargers to install

Based on 68.75% yearly growth in EV ownership



Top Holiday Road
A40
8 Cars per day

Top Motorway
M25
12 Cars per day

Meet demand with
up to 28
EV Chargers

Return on Investment

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EV Chargers	Initial Investment	Average Charging Price	Average Charging Cost	Average Profit Per Car
28	£1,710,000	£39.50	£36.50	£3.00

Key Data

£470,000 Annual Additional Income	£330.22 Total Annual Charging Profit	£470,330.22 Total Annual Profit
68.75% Annual EV growth rate	3.64 Average ROI time (years)	2.93 Average ROI (years) with EV growth rate

A40

£479,094.56 Total profit	3.57 ROI time (years)	2.90 ROI time (years) with EV growth rate

M25

£483,587.05 Total profit	3.54 ROI time (years)	2.89 ROI time (years) with EV growth rate

Assumptions

- Charging costs and sales data provided represent the sales for the forecourt for a given year (2022).
- Payback period is calculated based on the investment of £1.71m (28 chargers and cost of forecourt).

Profit per Charge: Grouped

Price Group	Count	Average Charging Cost	Average Charging Price	Average Profit
£25 to £49	44	£33.62	£36.39	£2.77
Above £50	35	£57.42	£62.14	£4.72
Unde £25	31	£16.96	£18.35	£1.39
Total	**110**	**£36.50**	**£39.50**	**£3.00**

Profit per Charge: Individual Vehicles

Car ID	Charging Price	Charging Cost	Charging Profit
32	£13.00	12.01	0.99
65	£13.00	12.01	0.99
104	£13.00	12.01	0.99
110	£13.00	12.01	0.99
25	£14.00	12.94	1.06
57	£14.00	12.94	1.06
95	£14.00	12.94	1.06
11	£15.00	13.86	1.14
62	£15.00	13.86	1.14
21	£16.00	14.78	1.22
50	£16.00	14.78	1.22
67	£16.00	14.78	1.22
Total	**£39.50**	**36.50**	**330.22**

Traffic Volume and Competitor Data

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Traffic and Competitor Data

Number of Vehicles Passing Fixed Traffic Camera Points per Day

Department for Transport Open Data, 2022

Road A1(M) A23 A30 A40 A64 M1 M20 M25 M40 M5

Existing Public EV Charger Locations

UK Government National Chargepoint Registry

Road A1(M) A23 A30 A40 A591 A64 M1 M20 M25 M40

Road Name	EV Charger Count
A1(M)	105
M1	66
A30	34
M5	19
M40	16
M25	13
A23	10
A40	7
A64	7
M6	6
M20	5
A591	3
Total	**291**

Note

No Traffic Data was available for the A591.

Recommended Locations based on Traffic and Competitor Data

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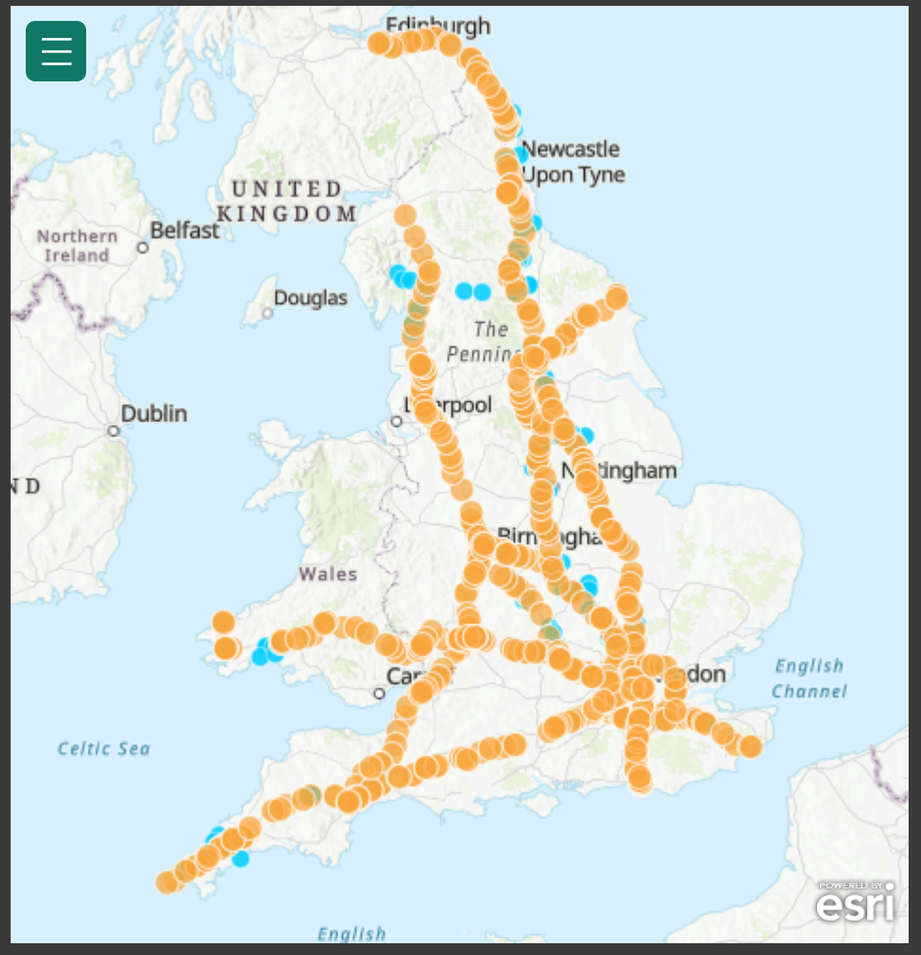
Traffic and Competitor Data

Traffic Camera Locations (Orange) and Existing Public EV Charging Points (Blue).



Top Locations

Road	Number of Cars and Taxis Traffic per Day	Distance to Nearest Competition	Distance to A30 Roundabout	Distance to M3 Roundabout	Distance to M4 Roundabout
M25					
Junction 11 to Junction 12	4,422.75	9.60	7.90	1.00	12.60
Junction 15 to Junction 16	4,489.34	20.60	8.10	14.80	4.40
Junction LA Boundary to Junction 12	4,564.23	14.20	4.80	5.90	7.90
Junction 14 to Junction 13	4,809.38	14.50	1.00	7.90	6.50
Junction LA Boundary to Junction 14	5,501.70	19.40	6.50	12.60	1.00

Closest Competition

Owner Information	Description
Care of Mer	EBC Hollyhedge Car Park 1|EBC Hollyhedge Car Park 2|Hollyhedge Road Car Park, Elmbridge
Gridserve	GS10049|GS10050|GS10051
N/A	Hilton Cobham
Equans EV Solutions	Starbucks Cobham
N/A	Woodlands Park Hotel

Top 2 Locations

1. M25 Junction LA Boundary to Junction 14.
2. M25 Junction 15 to Junction 16.

Justification

- High traffic volume per day.
- Distance from closest competition.
- Proximity to nearby roundabout/ motorway for easy access.

Notes

Competitiors in the area have less than 5 Chargers per location.

Sources

Navigate to

Traffic and Competitor Data

Sources Used:

1. Traffic Data: https://roadtraffic.dft.gov.uk/downloads
2. Location of charging points https://www.gov.uk/guidance/find-and-use-data-on-public-electric-vehicle-chargepoints
3. UK Postcodes to Lat Long- https://github.com/dwyl/uk-postcodes-latitude-longitude-complete-csv
4. UK Postcodes and Lat Long https://download.geonames.org/export/zip/
5. UK Postcodes and Lat Long https://www.doogal.co.uk/PostcodeDownloads
6. UK Postcodes and Lat Long https://findthatpostcode.uk/
7. https://cdn.fleetnews.co.uk/web-clean/1/root/car-ownership-by-region.png