Going Electric

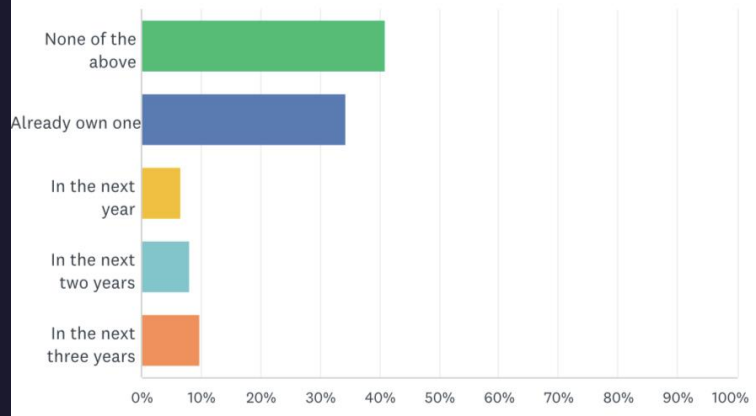
The transition to Electric Vehicles

Mark White

Whittington EV Survey

Do you own or are you considering buying an Electric Vehicle ?

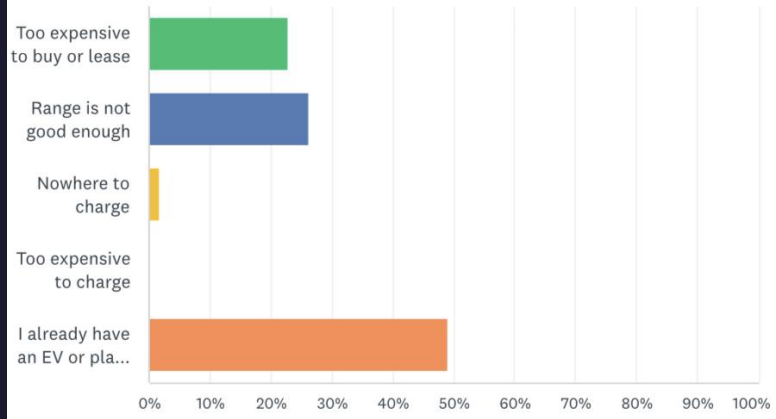
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
None of the above	40.98%	25
Already own one	34.43%	21
In the next year	6.56%	4
In the next two years	8.20%	5
In the next three years	9.84%	6
TOTAL		61

If you won't consider an EV, what is the main reason ?

Answered: 57 Skipped: 4



ANSWER CHOICES	RESPONSES	
Too expensive to buy or lease	22.81%	13
Range is not good enough	26.32%	15
Nowhere to charge	1.75%	1
Too expensive to charge	0.00%	0
I already have an EV or plan to own one	49.12%	28
TOTAL		57

Types of EV

Hybrids - Internal Combustion Engine (ICE), a small battery and an Electric Motor

Self Charging/Mild Hybrid (MHEV) – smallest battery, least battery range, charges as you drive, no charger needed

Plug In Hybrid (PEV) – slightly larger battery, plug in to charge, limited battery range (approx 30 miles)

Great for short trips, less efficient on long journeys due to the extra weight of the battery and electric motor added to the ICE

May have less boot space as the battery is often below the boot

No servicing benefits as the ICE still needs a normal service, plus the battery & motor

Often used by company car drivers to get tax benefits but still able to drive on fossil fuels

Battery Electric Vehicle (BEV) – large battery, no ICE so cleanest emissions, furthest range (approx 120 – 350 miles)

https://www.carwow.co.uk/blog/electric-cars-vs-phev-vs-hyrbid-cars

Range

WHAT IS WLTP?

The **W**orldwide Harmonised **L**ight Vehicle **T**est **P**rocedure measures new vehicle fuel economy, emissions and electric driving range.

WLTP COMBINED MPG
The most useful figure for comparing fuel economy between cars is an average of:

WLTP LOW
Tested at speeds up to 35mph

WLTP MEDIUM
Tested at speeds up to 47mph

WLTP HIGH
Tested at speeds up to 60mph

WLTP EXTRA HIGH
Tested at speeds up to 81mph

IT TAKES INTO ACCOUNT:

Acceleration | Braking | Stoppages | Rolling resistance | Engine/gearbox | Optional equipment

256 miles

The Skoda Enyaq iV 60 has an official WLTP combined range of **256 miles** while the Enyaq iV 80, with its bigger battery, can cover up to 333 miles between charges. A 7.2kW home wallbox will fully charge the Enyaq iV 60 in around 9 hours and 30 minutes, while the Enyaq iV 80 takes approximately 13 hours.

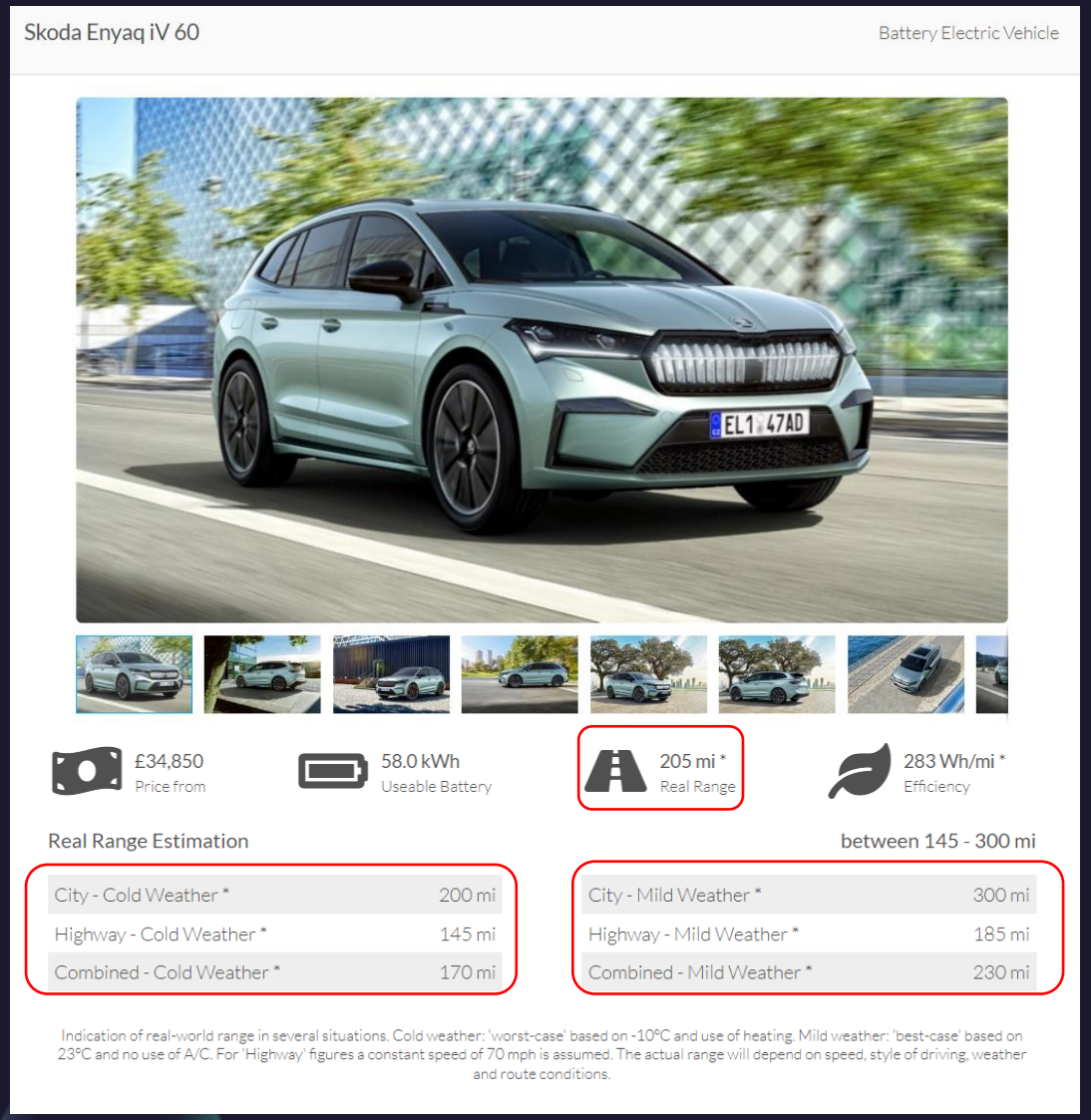
Range

WLTP – Don't believe the numbers…

The EV Database - https://ev-database.uk/

What impacts range

- Type of Driving (Regenerative Braking)
- Temperature (Battery pre-conditioning)



Price – EV vs ICE (Internal Combustion Engine)

208 AND E-208 ALLURE PREMIUM

‹ view other versions

208 ALLURE PREMIUM+ 1.2L PURETECH 100 EAT8 S&S

Finance Product	PCP
36 Monthly Payments	£350.18
Customer Cash Deposit	£2,000.00
Peugeot Deposit Contribution	£1,000.00
Total Deposit	£3,000.00
Vehicle Price (OTR)	£24,170.00
Total Amount of Credit	£21,290.00
Optional Final Payment To Buy	£11,618.00

E-208 ALLURE PREMIUM+ ELECTRIC 50KWH 136

Finance Product	Passport
36 Monthly Payments	£623.65
Customer Cash Deposit	£2,000.00
Peugeot Deposit Contribution	£600.00
Total Deposit	£2,600.00
Vehicle Price (OTR)	£32,645.00
Total Amount of Credit	£30,045.00
Optional Final Payment To Buy	£13,404.00

3 Year PCP based on 12,000 miles per annum

Cost of Ownership

		Peugeot 208		3 Year Cost Peugeot 208	
		Petrol	Electric	Petrol	Electric
PCP (Monthly)		£350	£623	£12,950	£23,051
Car Tax (Annual)		£165	£0	£495	£0
Servicing	Service 1	£199	£70	£893	£279
	Service 2	£249	£209		
	Service 3	£399	£0		
Petrol every 10,000 miles - Electric at 8,000 miles then every 16,000 miles					
Petrol @ £1.70 (£7.72 per Gallon)	36,000 miles @ 50mpg			£5,558	
Electricity @ 9.5p per kwh	36,000 miles @ 3.5 miles per kwh				£977
* more on EV Tariffs later					
	3 Year Cost of Ownership			£19,896	£24,307

Subject to mileage, mpg, fuel and energy price fluctuations, assuming home charging capability

Affordable EV's

Standard Range

Real Range Estimation		between 130 - 275 mi	
City - Cold Weather *	180 mi	City - Mild Weather *	275 mi
Highway - Cold Weather *	130 mi	Highway - Mild Weather *	170 mi
Combined - Cold Weather *	155 mi	Combined - Mild Weather *	215 mi

Long Range

Real Range Estimation		between 160 - 330 mi	
City - Cold Weather *	220 mi	City - Mild Weather *	330 mi
Highway - Cold Weather *	160 mi	Highway - Mild Weather *	205 mi
Combined - Cold Weather *	190 mi	Combined - Mild Weather *	260 mi

What Car? says...

★★★★★

Think everything is getting too expensive? Well, you might like the **MG4 EV** then. The latest model from the Chinese-owned brand is one of the cheapest electric cars you can buy.

BBC TopGear

CAR REVIEW

MG Motor UK MG4 review

9/10

£28,440 - £31,440 | **£284 p/m** with Leasing.com

WHAT'S THE VERDICT?

"When you dig into what the MG4 does for the money, it's probably the only car in the class to recommend"

OVERALL AUTO EXPRESS RATING

★★★★½

4.5 out of **5**

Cost of Ownership

	Peugeot 208		MG4	3 Year Cost		
				Peugeot 208		MG4
	Petrol	Electric	Electric	Petrol	Electric	Electric
PCP (Monthly)	£350	£623	£412	£12,950	£23,051	£15,244
Car Tax (Annual)	£165	£0	£0	£495	£0	£0
Servicing				£893	£279	£399
Petrol @ £1.70 (£7.72 per Gallon)	36,000 miles assuming 50mpg			£5,558		
Electricity @ 9.5p per kwh	36,000 miles assuming 3.5 miles per kwh				£977	£977
* more on EV Tariffs later						
3 Year Cost of Ownership				£19,896	£24,307	£16,620
Final Payment to Buy				£11,618	£13,404	£14,859
Outright ownership in 3 years				£31,514	£37,711	£31,479

Subject to mileage, mpg, fuel and energy price fluctuations, assuming home charging capability

Charging

Do you have access to off-street parking that could be used for EV charging ?

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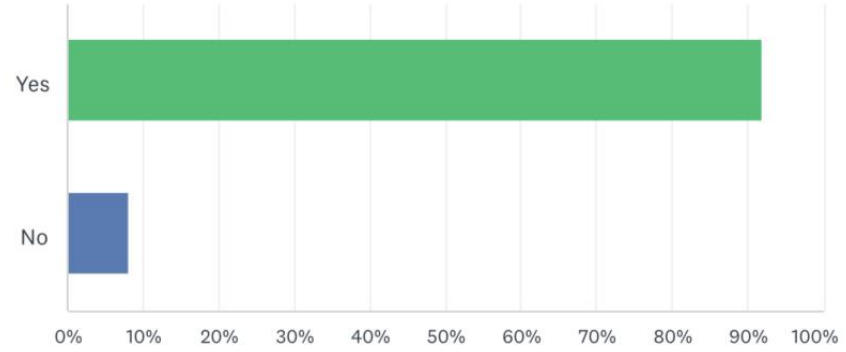
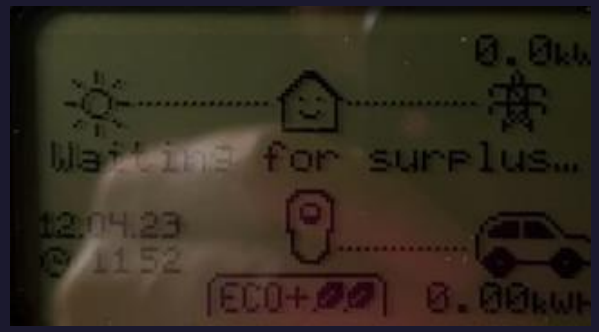


ANSWER CHOICES	RESPONSES	
Yes	91.80%	56
No	8.20%	5
TOTAL		61

Home Charging

- Granny Charging – 3 Pin Plug 3kwh speed
  - 60kw battery / 3kwh = 20 hours charge time
- Budget approx £1000 to get a home charger installed 7kwh
  - 60kw battery / 7kwh = 8.5 hours charge time
- Need a qualified electrician or installer to survey and quote
- Your car dealer may contribute to the cost
- Get a solar compatible charger if you have (or may get) solar



Home Charging – Grants

Grants for homeowners no longer exist

Flats & Renters

An electric vehicle chargepoint grant (also called an EV chargepoint grant) can help towards the cost of installing an electric vehicle chargepoint socket at your property.

EV chargepoint grants have replaced the Electric Vehicle Homecharge Scheme (EVHS). If you applied to the EVHS and you're waiting for a decision, you do not need to apply for an EV chargepoint grant.

How much you can get

You can get either £350 or 75% off the cost to buy and install a socket, whichever amount is lower.

Landlords

EV chargepoint grant

An EV chargepoint grant gives you money off the cost of installing an electric vehicle chargepoint socket.

You can get either £350 or 75% off the cost to buy and install a socket, whichever amount is lower.

Each financial year, you can get up to:

- 200 grants for residential properties
- 100 grants for commercial properties

EV infrastructure grant

An EV infrastructure grant gives you money off the cost of wider building and installation work that's needed to install multiple chargepoint sockets.

The work can be for sockets you want to install now and in the future. For example, an EV infrastructure grant can cover things like wiring and posts.

You can get up to £30,000 or 75% off the cost of the work. The amount depends on how many parking spaces the work covers.

You can get up to 30 infrastructure grants each financial year.

Each infrastructure grant must be used for a different property.

https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles

Home Charging – EV Tariffs

Octopus Go

Britain's most popular EV tariff

The smart tariff with super cheap electricity for 12p/kWh between 00:30 - 04:30 every night

Fill up for the tenth of the price of a traditional car with Octopus Go, and keep your fuel costs around 3p per mile

Night rate (00:30 - 04:30):
9.5p / kWh

Day rate (04:30 - 00:30):
39.5p / kWh

Standing charge:
52.32p / day

60kw battery * 9.5p per kw = £5.70

60kw battery * 7.5p per kw = £4.50

These prices may reduce at the end of June

Want Intelligent Octopus?

You need either an Octopus-compatible EV **OR** charger

Some of our brands...

Night rate (23:30 - 05:30):
7.5p / kWh

Day rate (05:30 - 23:30):
39.5p / kWh

Standing charge:
52.32p / day

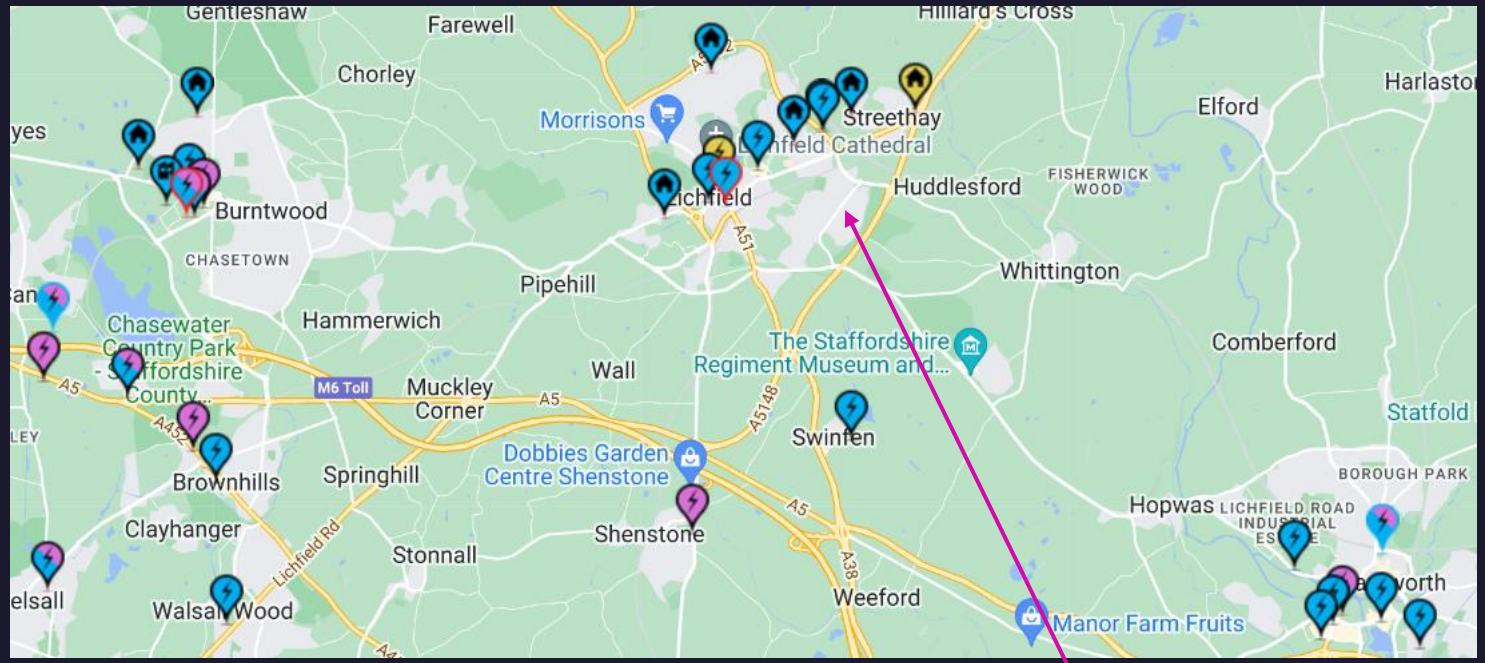
Smart meter required for special EV tariffs

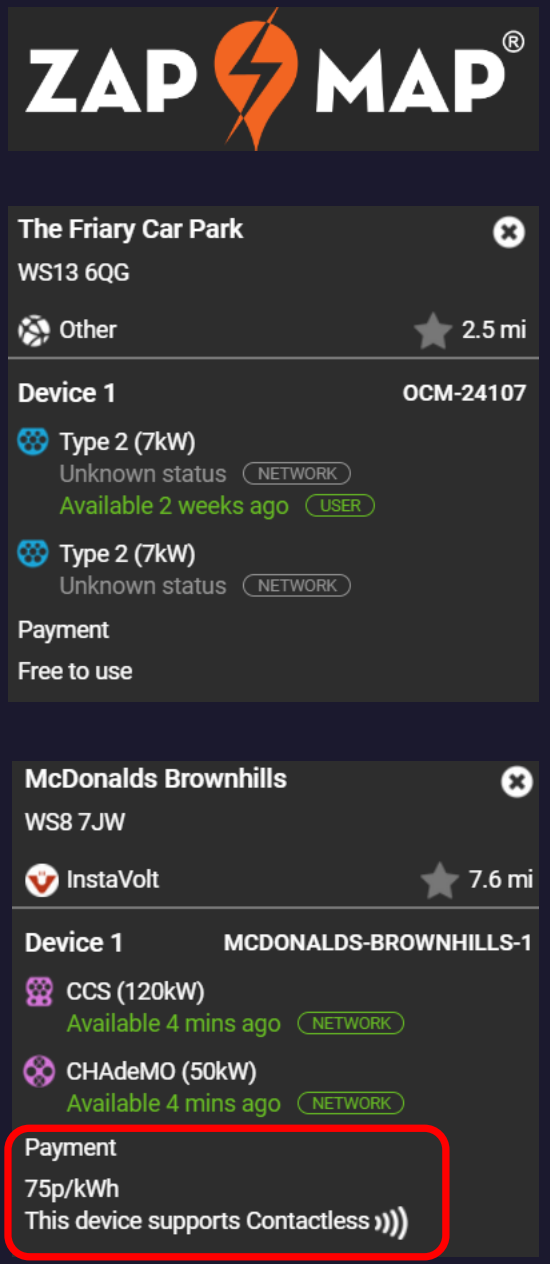
Avoid charging from empty, so you can fill your car up within the cheap energy window

Get a £50 Credit when switching to Octopus

https://share.octopus.energy/ideal-ash-761

Public Charging





A car with a 60kw battery charging from empty

The Friary – 60kw / 7kw per hour = 8.5 hours
McDonalds Brownhills – 60kw / 120kw = 30 mins

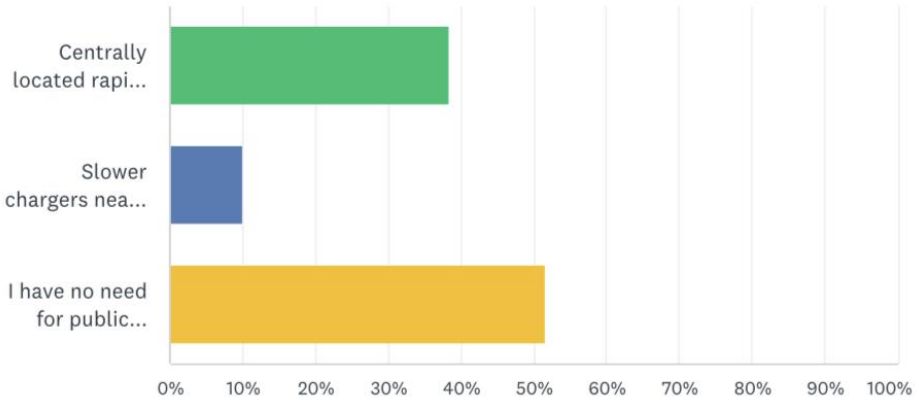
Boley Park Co-op 22kw chargers don't show on Zap-Map

Note. You rarely charge from empty and charging does slow down over 80% to protect the battery

Public Charging

Would you prefer a couple of rapid chargers in a central location, or lots of slow chargers (e.g. lamp posts/bollards) but nearer your home ?

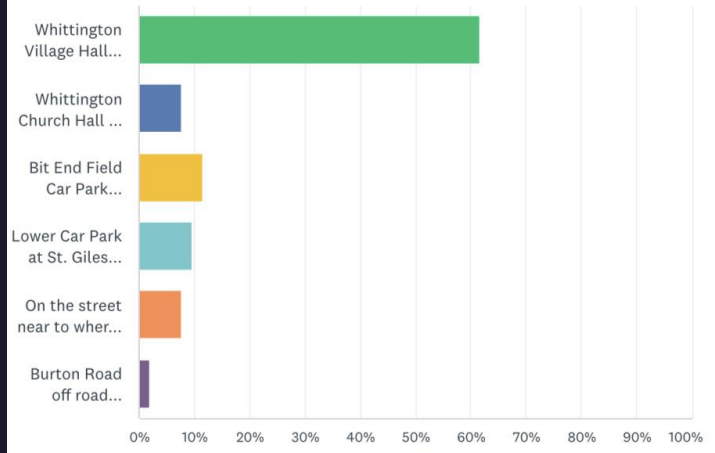
Answered: 60 Skipped: 1



ANSWER CHOICES	RESPONSES	
Centrally located rapid chargers	38.33%	23
Slower chargers near my home	10.00%	6
I have no need for public chargers	51.67%	31
TOTAL		60

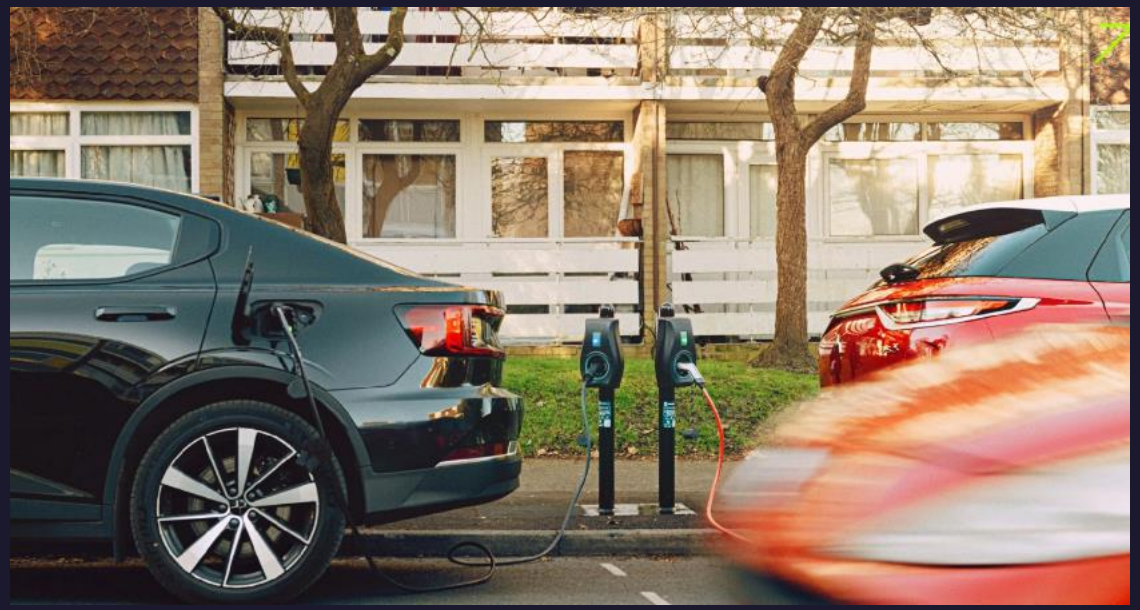
Which is your preferred location for a public charge point ?

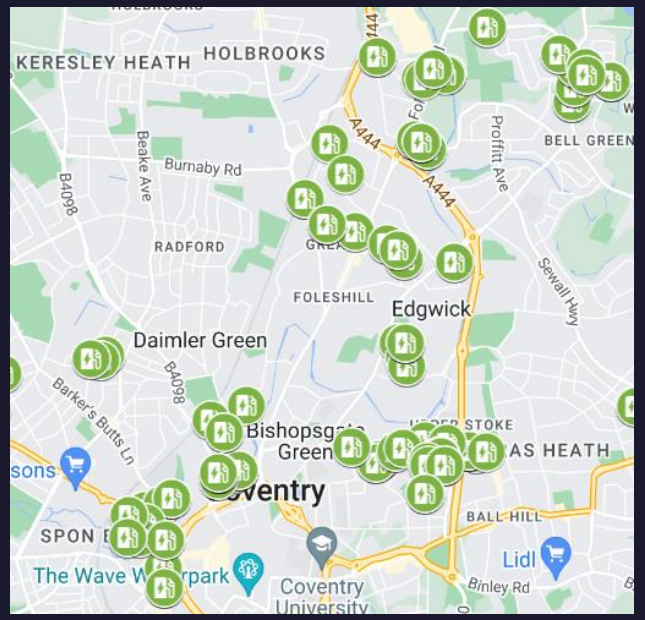
Answered: 52 Skipped: 9



ANSWER CHOICES	RESPONSES	
Whittington Village Hall Car Park	61.54%	32
Whittington Church Hall Car Park	7.69%	4
Bit End Field Car Park (beside the Bowling Club)	11.54%	6
Lower Car Park at St. Giles Hospice	9.62%	5
On the street near to where I live	7.69%	4
Burton Road off road parking area	1.92%	1
TOTAL		52

Public Charging





https://www.connectedkerb.com/take-action/community-action/

Hints & Tips

Do your numbers before switching is it really cost effective, or are you happy with the additional cost to do your bit for the environment

Get the biggest battery you can afford to save on public charging costs

Get a smart meter installed and research EV tariffs

If you can't charge at home, can you cope with public charging, maybe work has chargers

For long journeys, do your homework on public chargers, always have a Plan B

Know how fast a charge your car can receive, don't pay for ultra fast charging
e.g. Ionity's 350kw chargers if your car can't take advantage e.g. 100kw limit

Invest in a flask and a picnic, you'll spend more on coffee and cake than you spend on charging

Thank You

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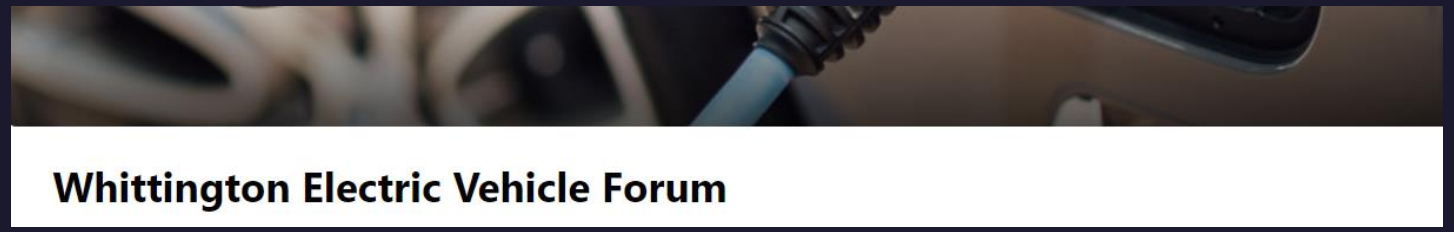
https://www.facebook.com/groups/388860875849440



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