Taxi and Private Hire Transition to EV Study

Suffolk County Council

February 2025

This study has been supported by Suffolk's public sector organisations as part of a commitment to deliver a shared Climate Emergency Plan.

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Executive Summary

Suffolk's taxi and private hire vehicle (PHV) fleet emitted **9,118 tonnes of CO_2** in the last year, which is equivalent to driving from Lowestoft to Newmarket 335,220 times. Facilitating the electrification of this sector would be a major step towards reducing tailpipe emissions and improving air quality in Suffolk, as well as decarbonising the fleet to reduce the impact on climate change. These two outcomes support the Suffolk Air Quality Strategy, the Suffolk Climate Emergency Plan and the partners' shared goal of Suffolk reaching net zero by 2030.

The survey conducted with the taxi and PHV fleet has provided key data to help Suffolk Councils gain an understanding of the current view of, and concerns, related to EVs. The drivers identified the following three main perceived barriers when switching to an EV:

1. Electric vehicles cannot drive far enough on a single charge
2. Electric vehicles that are suitable for me are too expensive
3. There are not enough places to charge.

There is evidently a key issue relating to the persistence of misconceptions about EVs (for example their range, amongst others identified by the drivers), that could be easily addressed through awareness raising and education.

Financial support was consistently identified as something that would help the drivers to make the switch, particularly the upfront cost of the vehicle.

After evaluating the data and researching into what other Local Authorities in England are delivering to support their taxi trades, it is clear the approach required to support the taxi and PHV sector needs to include a range of different measures, to enable effective and meaningful change.

The options for interventions included in this report are broken down into the following elements below (Section 6, page 25.):

- Behavioural change
- Infrastructure improvements
- Financial support
- Licensing policy.

The measures identified as 'quick wins' (subject to funding and resources) include:

- Provision of information to challenge misconceptions about EVs.
- The increased roll-out of chargepoints through the Local Electric Vehicle Infrastructure (LEVI) fund, (installations will be taking place from 2025 onwards).
- Policy changes that are within the complete control of local authorities.

For any option(s) taken forward, it is recommended it should be introduced as a pilot first, to test the suitability and uptake before rolling out further.

The following key recommendations will support the taxi and PHV trade in making the transition to electric.

1. The Suffolk Licensing Officers Group (SLOG) members and Suffolk County Council to work together to consider the options for implementing policy changes identified in Section 6.

2. Suffolk Climate Change, Environment and Energy Board (SCCEEB), Suffolk County Council on behalf, should explore the opportunity for incentive packages as outlined in Section 6.

3. EV Experience Day (EVEX25) at Trinity Park in July 2025 to have a focus on enabling the taxi and PHV drivers to experience and test drive electric taxi's, talk to the suppliers and to understand the support available to help them transition to EVs.

4. As the Local Transport Authority, Suffolk County Council should consider supporting the taxi and PHV trade in transitioning to electric in the Area Based Plans.

1. Background

Suffolk County Council, working collaboratively with the Districts and Borough, gathered feedback and views from the taxi and private hire trade regarding the transition from internal combustion engine (ICE) vehicles to electric vehicles (EVs) in Suffolk and current travel behaviours.

This study has been supported by Suffolk's public sector organisations as part of a commitment to deliver a shared Climate Emergency Plan. This sets out how partners will work together to support and guide residents, communities, and businesses to realise the benefits of making low carbon choices, setting Suffolk on the path to net zero. This work also supports the Suffolk Air Quality Strategy[1] through improving air quality through reducing tailpipe emissions.

Alongside the net zero target for Suffolk, the UK has committed to ending the sale of new petrol and diesel cars by 2035, under the Zero Emission Vehicle (ZEV) mandate. This is a significant step in the journey towards reducing emissions from the UK's transport sector.

Suffolk will need to play a key role in supporting this roll-out, ensuring chargepoints (CPs) are fairly distributed across both urban and rural areas, supporting the charging needs of residents, businesses and visitors. The Suffolk EV Charging Infrastructure Strategy[2] provides information on how this will be achieved.

The benefits of encouraging a transition to EVs for Suffolk is to reduce carbon emissions and reduce the levels of air pollution (especially in urban areas).

2. Introduction

A survey was undertaken to gain an understanding of the characteristics and travel behaviours of taxi and private hire drivers in Suffolk. The aim of the survey was to help identify trends and themes, and to ultimately help inform Suffolk Councils of interventions required to encourage the taxi and private hire trade to make the transition from ICE vehicles to EVs.

Suffolk County Council worked closely with the Energy Saving Trust, who provided advice and expertise on the types of questions to include on the survey. All participants were given the option to be entered into a prize draw to win a £100 high-street shopping voucher as an incentive for completing the survey.

Suffolk County Council also worked with the Suffolk Licensing Officers Group (SLOG), made up of licensing officers from the Borough and District councils. The SLOG members provide a valuable connection to the licensed drivers in Suffolk and were crucial in enabling the survey to reach their drivers.

[1] Air Quality in Suffolk - Suffolk County Council

[2] Suffolk Electric Vehicle Charging Infrastructure Strategy – Suffolk County Council

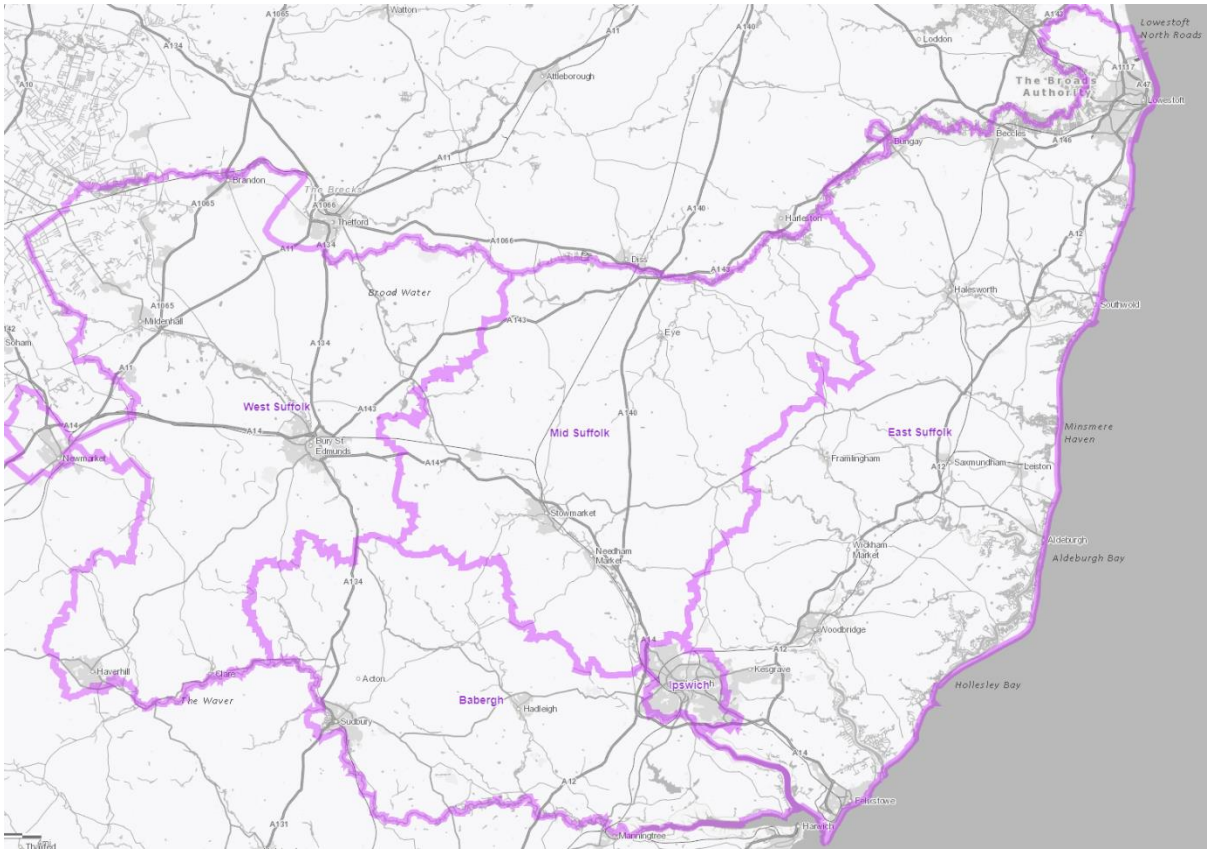

Figure 1: A map of Suffolk, identifying the Districts and Borough locations. Image credit: Suffolk Observatory.

Figure 1 shows the area in which this study covers, identifying the Districts and Borough that make up Suffolk.

In 2022, Babergh and Mid Suffolk District Councils (BMSDCs) delivered a similar survey to their drivers and received a total of 43 responses. Due to the fast-changing EV market, technology improvements and therefore enhanced user experiences, it was important that the BMSDC licensed drivers were given the same the opportunity as other District drivers to complete the survey. Where appropriate, the data presented in this report is compared to the survey data collected by BMSDC in 2022 to highlight any key observations.

To help gain a wider understanding of the taxi and PHV fleet in Suffolk, a separate study took place where every licensed vehicle registration was cross-referenced against DVLA data to identify the fuel type, vehicle age, emissions, mileage etc. This data, alongside the survey results, provide Suffolk Councils with baseline data on the current make-up of the fleet, and an understanding of the driver perceptions towards EVs.

For the purpose of this report, the key differences between hackney carriage taxis and PHVs are outlined in Table 1.

What are the differences between taxis and private hire vehicles?

Hackney Carriage taxi	Private Hire Vehicle
Can use any designated taxi ranks within their district	Cannot use taxi ranks
Can be flagged down in the street	Cannot be flagged down in the street
Available for ply-for-hire (can transport a passenger, with no prior booking)	Cannot transport a passenger, without the journey having been pre-booked
White number plates. Often have an illuminated sign on their roof	Yellow number plates
The licensed district sets the maximum fares that taxis can charge	PHV operators can set their own fares

Table 1: A summary of the key differences between Taxi and PHVs. Credit: Mid Suffolk District Council.

3. Fleet profile

A list of licensed vehicle registrations was obtained from the Districts and Borough, this was broken down into hackney carriage licensed vehicles and Private Hire licensed vehicles. The information was cross-referenced against the DVLA vehicle checker online data to identify the key characteristics that make-up the fleet, including vehicle fuel type, vehicle age, make and model, emissions etc.

The information provides baseline data on the existing vehicle fleet in Suffolk (as of June 2024). The data will enable us to monitor any changes to the fleet in coming years, with particular focus on the vehicle fuel types.

3.1 Licence type

Suffolk has a total of 1,999 licensed hackney carriage and PHVs, with the majority being licensed in Ipswich. 73% of the fleet has a private hire license, with 26% licensed as a hackney carriage vehicle. Figure 2 identifies the breakdown of licence type per District.

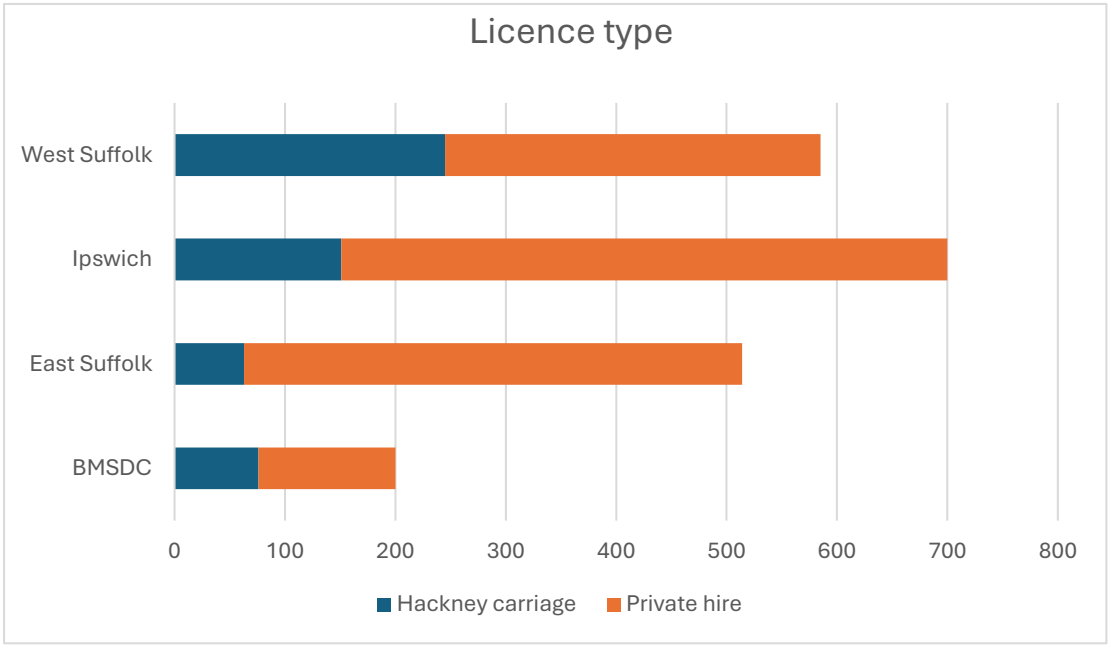

Figure 2: The licence type broken down into the Districts and Borough.

3.2 Vehicle fuel type

Figure 3 shows that most of the fleet is made up of diesel fuelled vehicles at 81%, followed by hybrid-petrol at 15%. The fleet currently has 15 fully electric vehicles, making up less than 1% of the total fleet. Of the 15 EVs, the highest proportion of them (7) are licensed in East Suffolk as PHVs.

Two of the 15 EVs are licensed as hackney carriage taxis, both based in West Suffolk, with the remaining licensed as PHVs. This data is consistent with the National data from Department for Transport[2] (DfT), where electric taxi's outside of London currently represent 0.8% of the fleet in 2024, with the proportion of electric PHVs slightly higher at 1.2%.

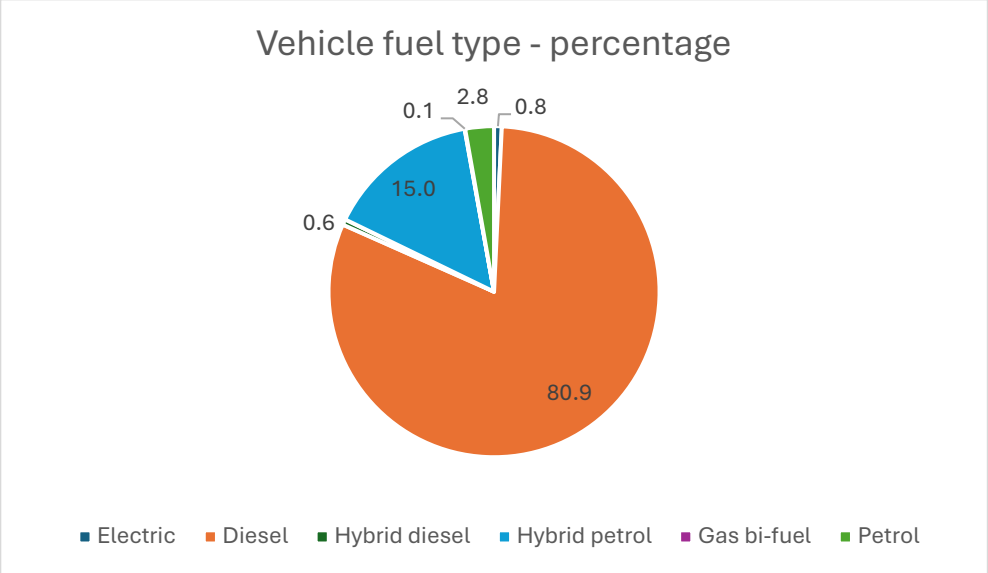

Figure 3: The total vehicle fleet split into vehicle fuel type.

3.3 Vehicle age

The age of the vehicles ranges significantly, with the majority of vehicles between 7-10 years old. A small proportion of the total fleet, 154 vehicles (representing 7.7% of fleet), are up to three years old, of which most are licensed in West Suffolk. This is a similar figure to the number of vehicles that are older than 15 years (141 vehicles, representing 7% of total fleet). Figure 4 shows the visual breakdown.

The average (median) age of the total fleet in Suffolk is 8 years. This figure is lower than the average age for all cars, with DfT vehicle licensing statistics show that as of December 2023, the average age of cars in England was 9.5 years[3]. This suggests the higher mileage completed by taxi and PHVs, as well as the safety and emissions requirements for the trade, means vehicle turnover will be higher for the sector over private cars. This suggests many are likely to be changing soon, indicating a potential window of opportunity for action.

[2] Taxi and private hire vehicle statistics, England, 2024 - GOV.UK (www.gov.uk)
[3] Taxi and private hire vehicle statistics, England, 2024 - GOV.UK (www.gov.uk)

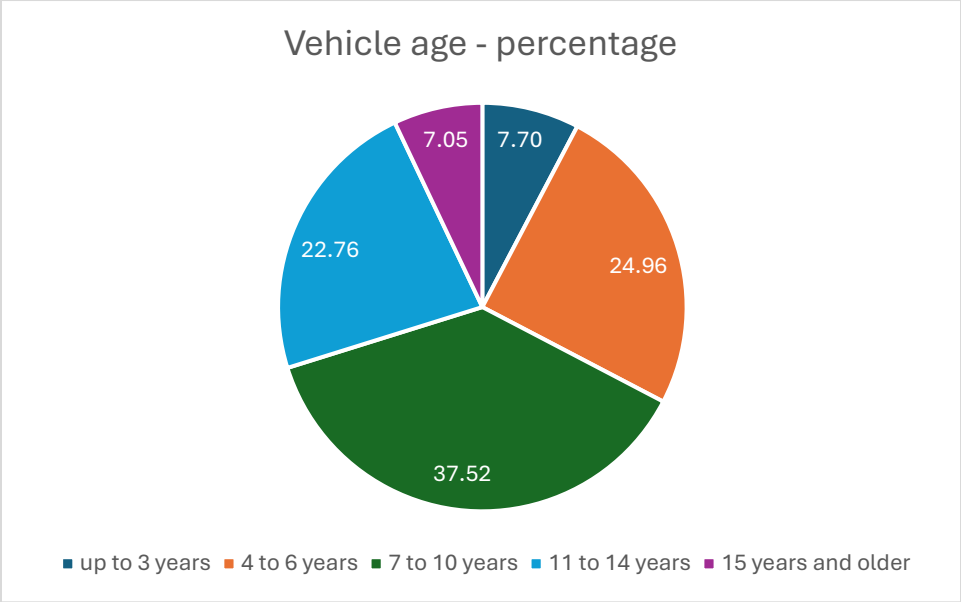

Figure 4: The total vehicle fleet split into age ranges.

3.4 Annual vehicle mileage

Using DVLA MOT data, mileage for every vehicle over the last 12-month period was calculated to provide an understanding of the average mileage travelled[4]. The average mileage over a 12-month period for each District and Borough is included in Figure 5. The average vehicle mileage driven by all taxi and PHV fleet drivers in Suffolk over the last 12 month period is 22,916 miles.

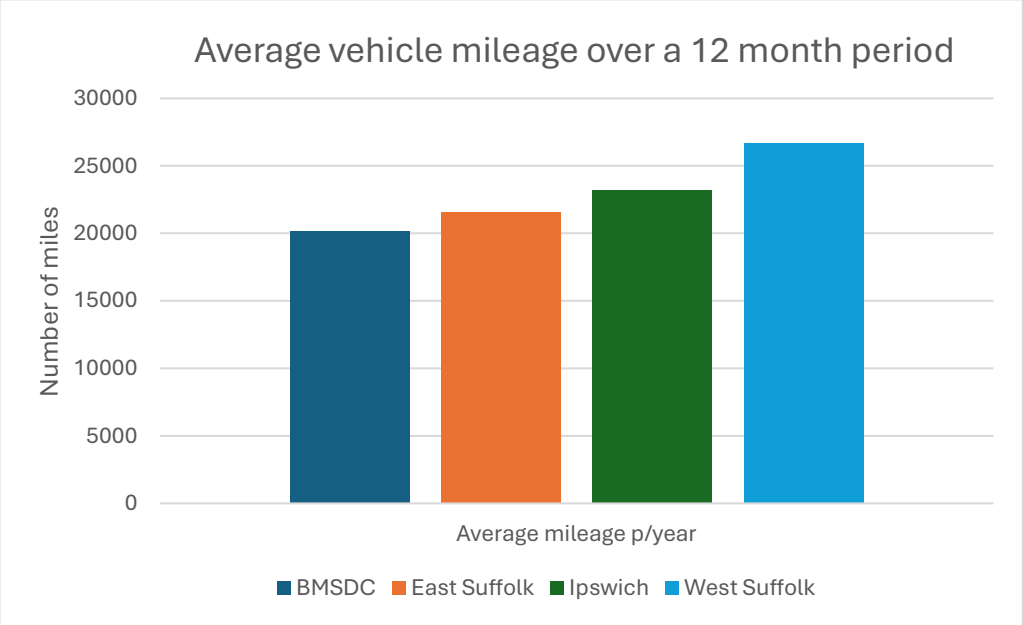

Figure 5: The average vehicle mileage over the last 12-month period, broken down into the Districts and Borough.

Mileage figures derived from MOT records in Figure 5 include miles travelled for personal use, as well as work use, as it wasn't possible to distinguish between both. Therefore, the business-related mileage figures should be taken as indicative rather than absolute.

Drivers in West Suffolk cover an average of 26,686 miles a year, followed by Ipswich drivers at 23,230 miles a year. East Suffolk drivers travelled an average of 21,584 miles and BMSDC drivers covered 20,166 miles. It is unclear on the reasons behind the variations, but suggestions include population numbers in each area, access to public transport links and the District locations in relation to nearby airports, visitor attractions and proximity to larger towns/cities outside of Suffolk.

3.5 Carbon emissions from tailpipe

To gain an understanding of the total carbon emissions emitted by the licensed hackney carriage and private hire fleet in Suffolk, vehicle mileage data was analysed and calculated to provide an estimate.

The DVLA provides a variety of data for every registered vehicle, such as model, fuel type, age and the CO_2 emissions (g/km)[5], amongst others.

Using the 1,999 licensed vehicle registrations provided to us by the Districts and Borough Councils, we cross-referenced every registration against the DVLA's MOT checker to identify the latest mileage figures per vehicle, against the mileage displayed for the MOT 12 months ago. This then provided a figure for the number of miles driven over that period, per vehicle.

The total mileage driven over the last 12 months per vehicle was converted into km and then multiplied by the vehicle's CO_2 emissions (g/km) to give an estimate of carbon emissions

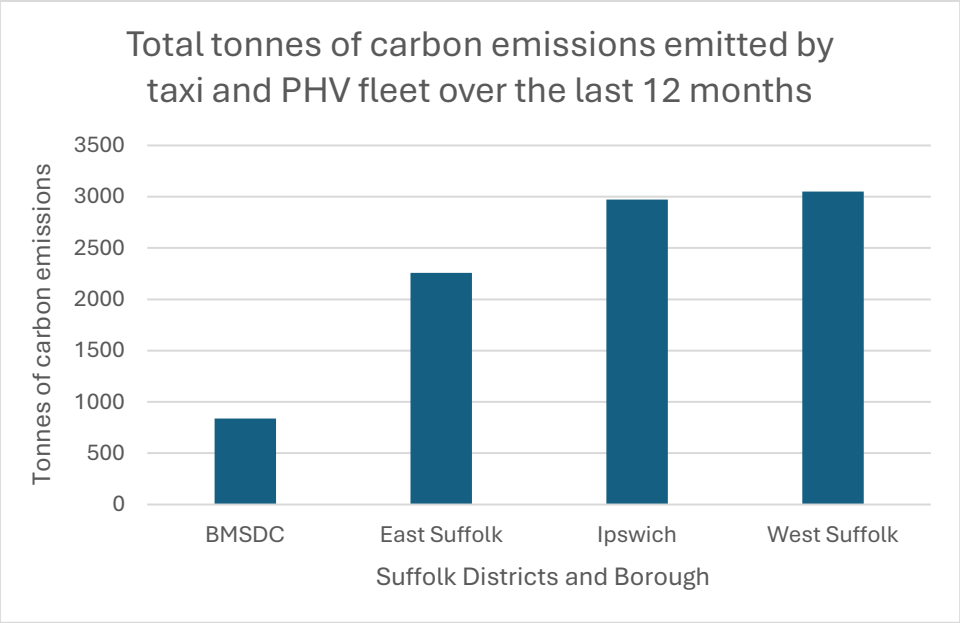

Figure 6: Total tonnes of carbon emissions emitted by the taxi and PHV fleet in Suffolk, covering the last 12 months.

[5] CO_2 emissions are measured by weight, in grams (g), and calculated by the amount of CO_2 emitted from the exhaust pipe per distance driven, which is measured in kilometres (km). This means that CO_2 emission rates are usually displayed as (g/km). The vehicle fuel type determines the CO_2 emissions (g/km).

emitted per vehicle. Figure 6 shows the total tailpipe carbon emissions emitted by the taxi and PHV fleet over the last 12 months in Suffolk, broken down into the Districts and Borough.

The total taxi and PHV fleet in Suffolk emitted approximately **9,118 tonnes** of carbon emissions from the tailpipe in the last 12 months, which is equivalent to driving from Lowestoft to Newmarket 335,220 times. Figure 6 shows the breakdown of this across the Districts and Borough, highlighting both West Suffolk and Ipswich emitting the highest amount of carbon emissions, likely due to the larger number of vehicles licensed in those areas.

It is important to note that some data was missing from certain vehicles regarding their CO_2 emissions (g/km), and we were unable provide a calculation for the vehicles less than one year old, due to them not yet producing 12 months of mileage data. In the same way as the data in Figure 5, the mileage figures include miles travelled for personal use as well as work use, as it wasn't possible to distinguish between the two. This means that the data included in Figure 6 should be taken as indicative estimates rather than absolute.

3.6 Popular vehicles used by the trade

The licensed vehicle fleet in Suffolk has a broad range of vehicle makes and models. The three most used vehicles under both hackney carriage and Private Hire licenses are listed in Table 2.

The Skoda Octavia and Toyota Prius are popular cars among both taxi licences, with the Octavia being the most popular vehicle across the whole fleet. This is consistent with data from DfT[6], where the Skoda Octavia was in the top 4 most popular models for taxi and PHVs in England, as of March 2024. The Toyota Prius was also identified as the most popular model for PHVs in England.

A key observation is the Toyota Prius is a hybrid vehicle, meaning it is fuelled by both petrol and a battery.

Hackney carriage vehicle models	No. of licensed vehicles	Private Hire vehicle models	No. of licensed vehicles
Toyota Prius (various models) 	38	Skoda Octavia 	131
Skoda Octavia 	35	Toyota Prius (various models) 	121

[6] Taxi and private hire vehicle statistics, England, 2024 - GOV.UK (www.gov.uk)

Mercedes E-Class (various models) 	33	Skoda Superb 	89

Table 2: A summary of the most popular vehicle models licensed in Suffolk.

Identifying the most popular vehicle makes and models is useful information as it helps to understand of the type and size of vehicle that would be required if they were to switch to EVs. Example EVs that may be suitable for the taxi and PHV trade are included in Appendix 1, Page 29.

4. Survey results

A survey was distributed to drivers and operators licensed across Suffolk via a link from East Suffolk, Babergh and Mid Suffolk Districts, West Suffolk and Ipswich Borough Councils. The survey was open between 11 January and 2 April 2024, with 419 completed responses. It is estimated the responses in this report represent 21% of total licensed drivers in Suffolk respectively.

4.1 Characteristics

The survey consisted of various questions to gain an understanding of the characteristics of the taxi and private hire drivers in Suffolk.

Figure 7 shows a breakdown of survey responses against the Districts and Borough. The survey received the most responses from East Suffolk Council, and the fewest from Babergh and Mid Suffolk Councils.

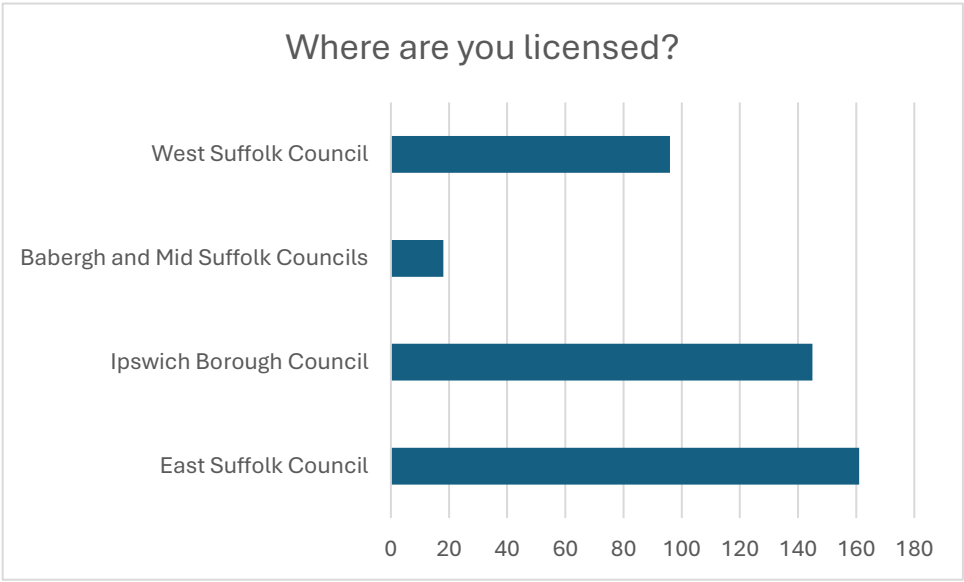

Figure 7: Response to the question: Where are you licensed? If you are licensed with more than one council, please select all options that apply.

4.1.1 License type

Of the 419 responses collected, 123 (29%) respondents stated they have dual driver licence, meaning they are both a private hire driver and a hackney carriage driver, as shown in Figure 8.

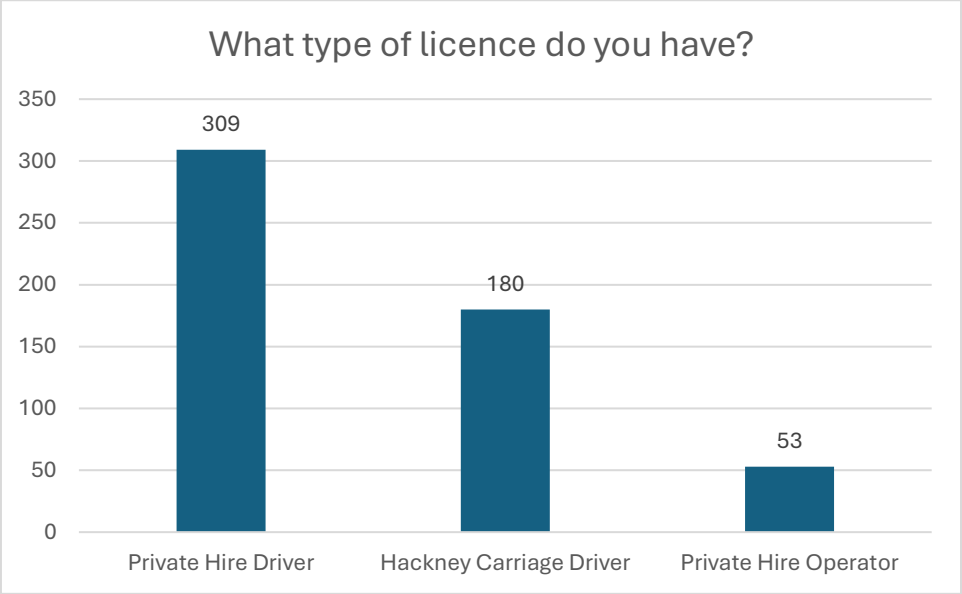

Figure 8: Response to the question: What type of license do you have? Where drivers had a dual licence, they were asked to select both hackney carriage and private hire driver.

4.1.2 Vehicle ownership

Responsibility for replacing the vehicle and any associated costs, such as maintenance, tax, insurance and costs for fuel, are typically the responsibility of the vehicle owner. More information on the maintenance costs involved with an EV is found in Appendix 2, page 32.

Figure 9 indicates 68% of respondents own the vehicle themselves, followed by 28% of respondents stating their employer or operator own the vehicle. The 1% that stated other, explained that although they are a licensed taxi driver, they are not currently working and therefore do not have access to a vehicle.

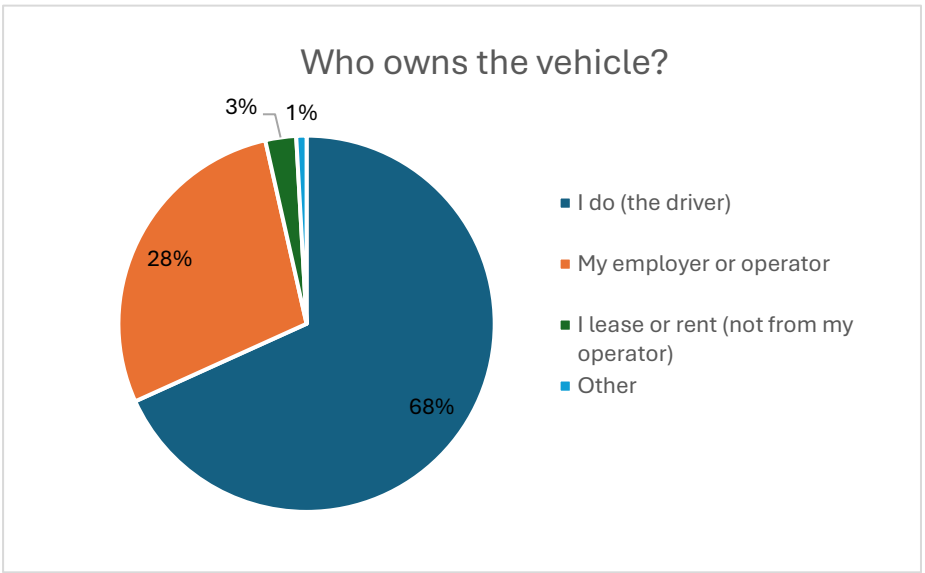

Figure 9: Response to the question: Who owns the vehicle?

If the 68% of respondents that own the vehicle themselves switched to an EV, they are likely to see a reduction in maintenance costs when compared to the petrol or diesel equivalents.

4.1.3 Vehicle location when not on shift

Figure 10 suggests most vehicles are kept off-street when not on shift, predominantly in a driveway or garage, or a shared private car park, such as a residential car park. If those drivers were to switch to an electric vehicle, and if they had the ability to install a home chargepoint, in theory they would be able to start their shift on a full charge (assuming they charge before their shift).

Depending on their fare lengths, they may have to top-up their battery using the public network during their shift. More on vehicle range and typical mileage in Section 3.2.

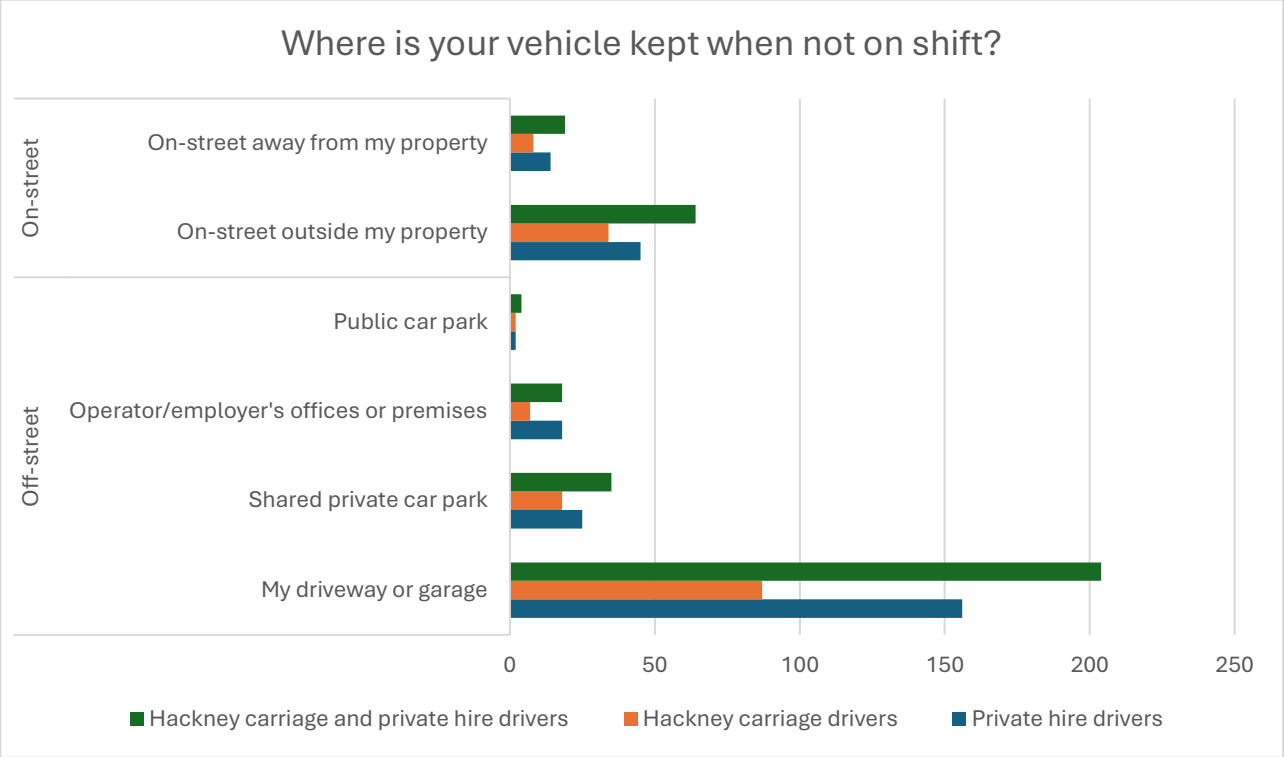

Figure 10: Response to the question: Where is your vehicle kept when not on shift?

18 drivers stated their vehicle is kept at the operator/employer offices or premises when not on shift. Those drivers could benefit from their employer accessing a grant through the Workplace Charging Scheme[7], which can provide support towards the costs of the purchase, installation and infrastructure of electric vehicle chargepoints at eligible places of work.

It is important to note that not all drivers have access to off-street parking, with approximately 25% relying on parking their vehicle on-street when not on shift. This is not surprising when 25% of total households in Suffolk rely on on-street parking. The £6.7million of funding from

[7] Workplace Charging Scheme - GOV-UK Find a grant (find-government-grants.service.gov.uk)

the Local Electric Vehicle Infrastructure (LEVI) fund, recently secured by Suffolk County Council, will support this audience with their charging needs, and will deliver charging infrastructure for residents without off-street parking.

4.2 Driving patterns

Drivers were asked various questions around their driving patterns and behaviours to help gain an understanding of a typical day's work in Suffolk. The questions were tailored to build a picture on possible downtime between clients, opportunities for chargepoint locations and distances covered on shift to understand whether there are EVs on the market that could cater for their needs.

4.2.1 Daily mileage

Figure 11 suggests 79% of drivers typically drive up to 200 miles a day on shift. This is consistent with the data collected from the BMSDC survey in 2022, where 46% of drivers stated they drive up to 200 miles in a day (the highest chosen option).

According to the Society of Motor Manufacturers and Traders (SMMT), the average range for all available electric cars is now 236 miles, meaning an EV should be able to provide enough range to support taxi drivers on a typical days' work in Suffolk, in good weather conditions. However, it's important to note that cars will lose approximately 10-20%[8] range in the winter months and in extreme heat conditions. This would require additional top-up charging during shifts for a large proportion of vehicles.

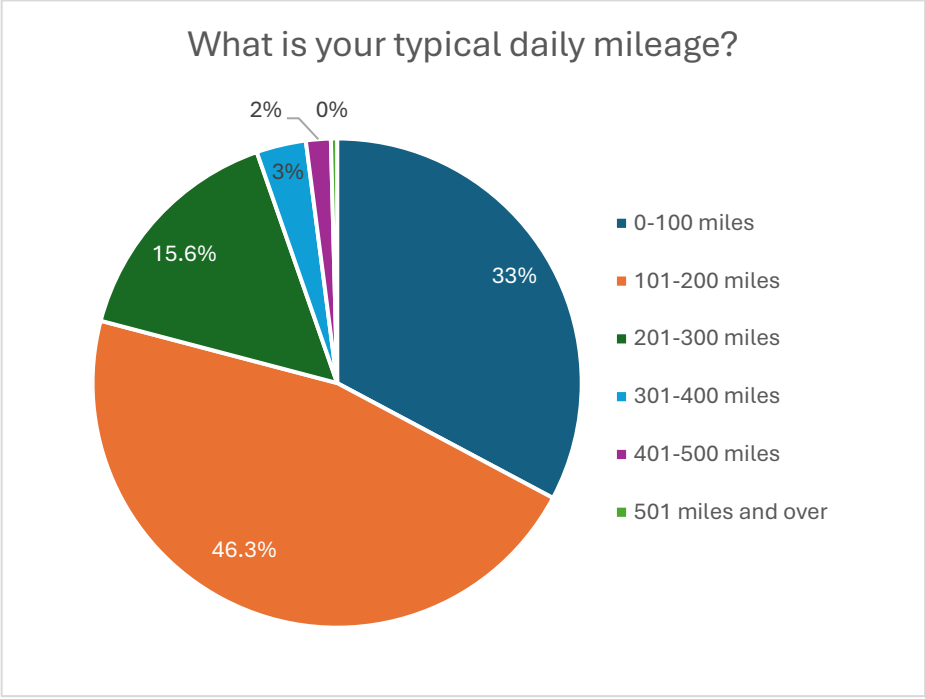

Figure 11: Response to the question: What is your typical daily mileage?

[8] Tests show electric vehicle range cut by up to a third in cold weather (fleetnews.co.uk)

4.2.2 Typical fare lengths

Drivers were asked to identify how often they take different length journeys, and over what frequency. This is to indicate how often they make shorter and longer journeys to gain an understanding of whether the range of an EV would sufficiently support their typical fare lengths.

Figure 12 shows the shorter distanced fares happen on a regular occurrence (0-5 miles, 6-10 miles, 11-20 miles), whilst the longer fare lengths of 51-80 miles and over 80 miles generally happen less often. This suggests an EV would be able to support their typical fare lengths, if planning ahead takes place to ensure enough charge for any longer distances, which may be easier for the PHVs over hackney carriages.

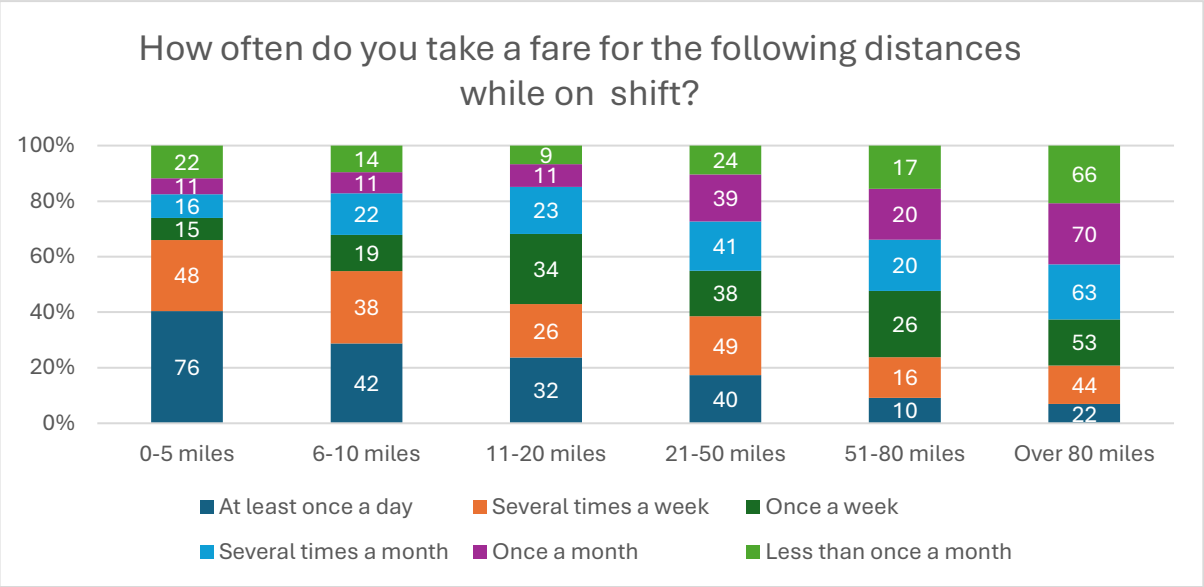

Figure 12: Response to the question: How often do you take a fare for the following distances while on shift?

4.2.3 Frequent long-distance destinations

To gain an understanding of charging requirements for the longer distance fare lengths (if drivers switched to an EV), drivers were asked what their three most frequent long-distance destinations are.

The question received 187 responses with the most popular destinations being Stansted, Heathrow, and Gatwick airports. Cambridge and Norwich closely followed as other frequent long-distance journeys.

The journeys to Heathrow and Gatwick are likely to be the furthest destinations from most areas across Suffolk, and likely to be over 100 miles one way. To build confidence amongst drivers who have an EV, or are looking to make the switch, Suffolk Councils could promote ZapMap and the locations of the rapid chargepoints along key routes so drivers are aware of where they can charge quickly, and conveniently.

Drivers were also asked how often they carry out rural trips where the destination is not a major town. 36% of respondents stated several times a week, followed by 30% of drivers

carrying out rural trips once a day. This is not surprising given the rural nature of Suffolk. This information highlights the need for chargepoints in rural areas as well as the busier urban areas. Plug in Suffolk has installed 100 sockets in rural areas across the County to date, and with many more installs planned, therefore, Suffolk Councils could promote the chargepoint locations to drivers to help build confidence. It is important to note that these chargepoints are 7kW and will typically add around 25 to 30 miles of range per hour, which is likely to create an increase in downtime for the driver.

4.2.4 Down-time

The drivers were asked to identify how long they spend on breaks during a typical day's shift, to help gain an understanding of availability for potential charging of a vehicle.

This information will help to identify whether the drivers will be able to charge up around their fares or if some behaviour change will need to take place to work their fares around charging times. The answer received responses from 246 of the drivers.

Figure 13 shows 71% of the drivers stated they have less than 15 minutes break in a typical day, followed by 56% of the drivers taking between 15 – 30 minutes break. This period would allow for a brief top-up of charge depending on the power and availability of the chargepoint, as well as the distance travelled to reach the chargepoint. However, the third highest response at 42% was 'I take no break'. If these drivers also have high daily mileage, then they would need to change their behaviour and fit fares in around charging their vehicle, to ensure they have enough range to meet all fares. This could cause a significant barrier to transition to EVs.

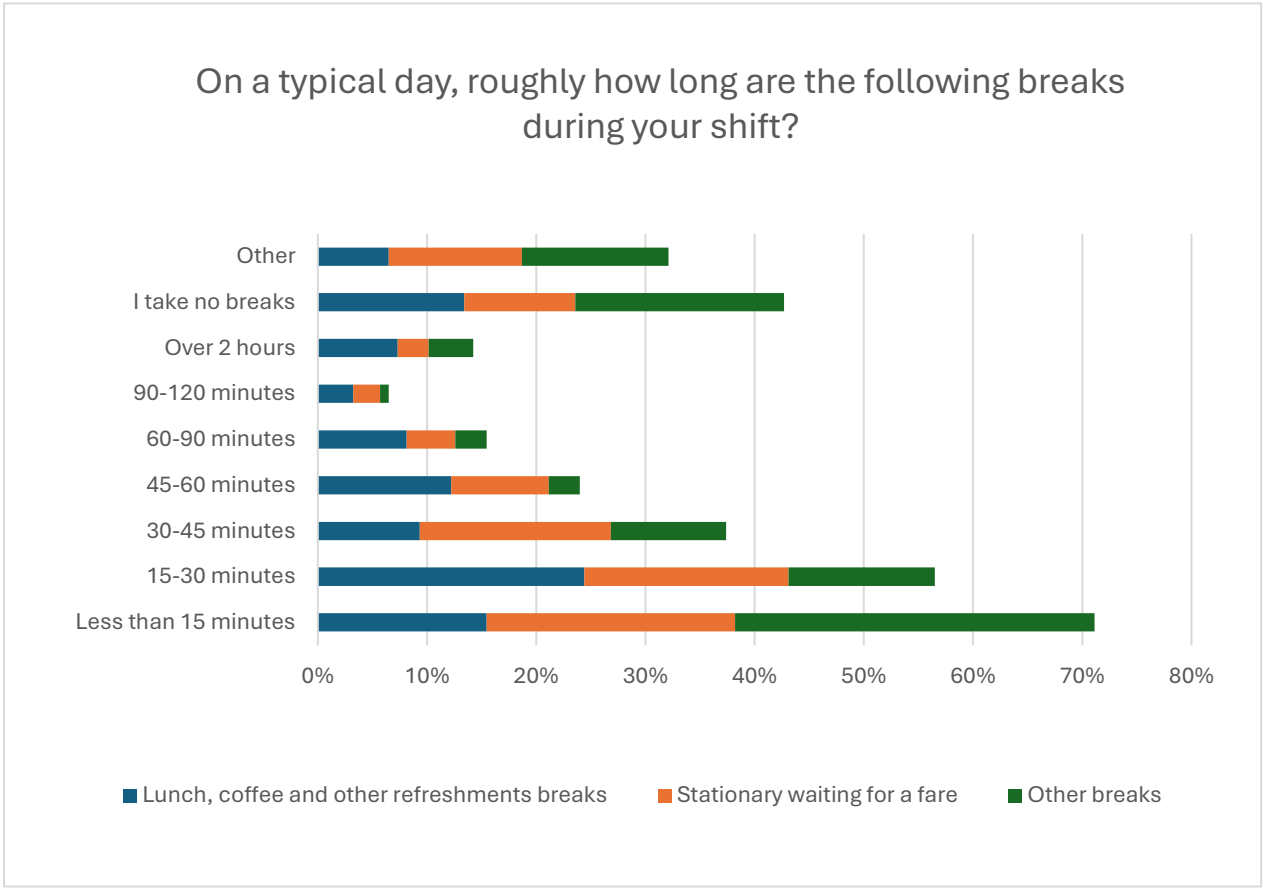

Figure 13: Response to the question: On a typical day, roughly how long are the following breaks during your shift?

4.3 Opinions on EVs

The opinions and attitudes of the drivers provide a crucial insight into the current barriers in switching to EVs, and therefore provide us with an understanding of where support and investment should be prioritised to overcome this.

4.3.1 Switching to an EV

Drivers were asked whether they are considering buying or leasing an EV for work, and over what timeframe. Figure 14 shows out of the 237 drivers that responded to this question, 33 (or 14%) claimed they are considering switching to an EV (that is, a total of anyone who said 'yes' to the question). 44% of respondents stated they will never think about buying or leasing an electric vehicle for work.

The response suggests there are significant barriers preventing drivers from making the switch. The following section explores the barriers in more detail.

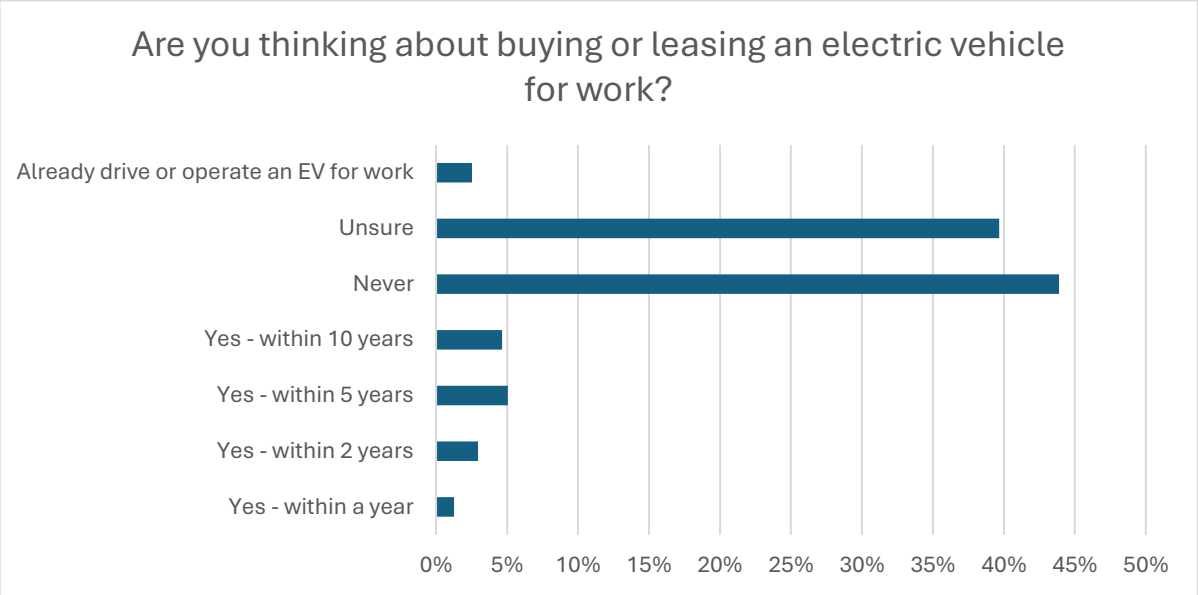

Figure 14: Response to the question: A summary of responses to the question 'are you thinking of buying or leasing an EV for work?'

4.3.2 Barriers to switching

Drivers were provided with a list of potential barriers and were asked to select their top three barriers that are preventing them from making the switch to EVs. The most popular barriers selected relate to the cost of the vehicle, the vehicle range, and the level of charging infrastructure in Suffolk.

This is consistent with the results from the BMSDC taxi survey completed in 2022, where the most popular two barriers were concerns over vehicle range and the high costs involved. Although those results represent the views from the BMSDC drivers only, it suggests concerns and barriers for EVs haven't improved over the last two years.

The barriers identified in Figure 15 suggest support for drivers could include financial assistance in purchasing/leasing an EV, as well as awareness raising/increasing knowledge of current vehicle ranges and chargepoint numbers; both of which have significantly increased recently, indicating the drivers may not be aware of the latest technologies and infrastructure.

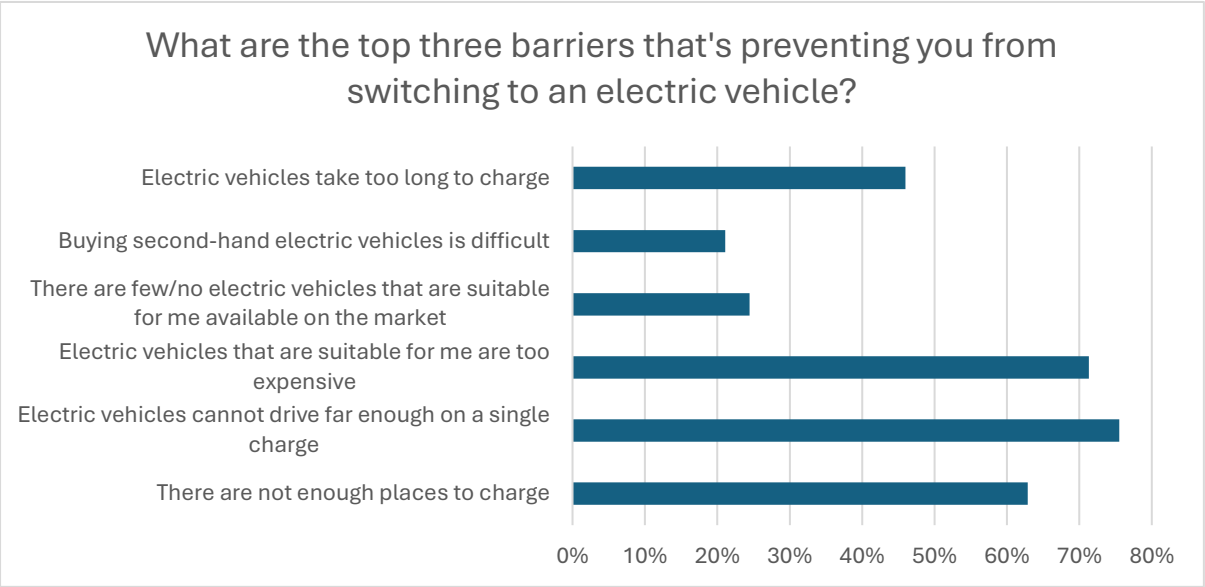

Figure 15: A summary of responses regarding the barriers preventing drivers from making the switch.

Barrier 1: 'Electric vehicles cannot drive far enough on a single charge'

The most popular barrier relates to the range of the vehicles, also called 'range anxiety'. Range anxiety is the fear of driving an electric car and it running out of power before you find a chargepoint or reach your destination. Range anxiety is broken down into two elements: the battery capacity and the charging infrastructure. In practice both have significantly improved in recent years. The latter also relates to the third most popular barrier selected: 'there are not enough places to charge'.

The average range of a new battery EV is now almost 300 miles, with the average range of all EVs at 236 miles according to the Society of Motor Manufacturers and Traders (SMMT). When looking at the taxi driver's typical daily mileage in Figure 11, 79% of drivers travel up to 200 miles a day. This suggests if they were to switch to an EV, they should be able to complete a day's work in one charge, depending on the efficiency of the driving, fare lengths and time of year (EVs often consume more energy in winter months due to heating the vehicle).

In terms of the infrastructure, at the end of May 2024, ZapMap confirmed there were over 62,000 charging sockets in the UK across 33,000 charging stations, this is a year-on-year increase of 43% in the number of public chargepoints.

Looking more closely at Suffolk, at the end of April 2024, the county had a total of 585 public charging devices (an increase of 62% from May 2023), representing 390.5 per 100,000 population. The data indicates the number of chargepoints have increased significantly locally, which should help build confidence and reduce range anxiety. Suffolk County Council has recently secured £6.7m funding from the Local Electric Vehicle Infrastructure (LEVI) fund to significantly increase the roll-out of chargepoints in Suffolk. With this in mind, we will continue

to see a significant rise in the number of chargepoints in the county, which may help alleviate range anxiety and it being a barrier for drivers.

Barrier 2: 'Electric Vehicles that are suitable for me are too expensive'

Barrier 2 refers to the financial constraints involved in purchasing/leasing an EV, where 71% of respondents stated EVs that are suitable are too expensive.

The purchase cost of EVs is higher than the petrol and diesel equivalents, which continues to be a barrier for most. However, the costs are lowering with time and will continue to do so. We are also seeing an increase in the second-hand market which is helping the purchase cost of an EV to be more affordable. More information on the costs associated with EVs is in Appendix 2.

When you look at the running cost associated with an EV, it is significantly cheaper than the internal combustion engine (ICE) vehicle equivalents. EVs are currently exempt from road tax, which saves on some money, although this will be changing from April 2025. As EVs run off a battery as opposed to an engine, there are significantly fewer moving parts on the vehicle which means EVs generally cost less to service and maintain.

The taxi and private hire trade require the use of Wheelchair Accessible Vehicles (WAVs) to adhere to their local licencing policies and the Equality Act 2020. Currently there are very few e-WAVs (electric wheelchair accessible vehicles) on the market, and for those that are, they are significantly more expensive than their ICE vehicle equivalents. The main reason why there are so few e-WAVs available is because manufacturers need to make sure the position of the battery does not interfere with the lowered floor that's required for wheelchair access. Some suppliers are successfully converting certain EV models to make them WAV compliant, however due to the location of the battery being under the vehicle floor, it creates challenges to find suitable EVs that can be converted.

Converted e-WAVs range in price from £35,000 - £80,000, with purpose built new e-WAVs from £60,000 - £80,000. Although this cost is expected to reduce with time as more models become available, it is still a significant barrier and one where financial assistance would be required to speed up the transition and availability of e-WAVs for the taxi and private hire trade in Suffolk.

The e-WAVs are also generally a larger, heavier vehicle to the non-WAV equivalents, which means the battery range will be less. This is an important factor and challenge to consider when exploring the current market and potential suitability of e-WAVs for the taxi and private hire trade.

The Government's Plug-in-Taxi Grant[9] (PiTG) is an incentive scheme designed to support the uptake of purpose built ultra-low emission vehicle (ULEV) taxis. The PiTG scheme offers a discount on the price of eligible taxis of up to a maximum of £6,000 or £3,000, depending on the vehicle's range, emissions and design. One of the requirements for the grant is that the vehicle should be wheelchair accessible.

Although the PiTG scheme will provide some welcomed support to the taxi and private hire trade, some additional support from Suffolk Councils may provide a larger incentive to make the switch, such as an additional grant scheme used in conjunction with PiTG scheme, offering EV drivers free or subsidised: licensing fees, permits for certain taxi ranks, tariffs at public chargepoints, or parking in public car parks.

[9] Plug-in taxi grant: eligibility and applications - GOV.UK (www.gov.uk)

4.3.3 Incentives for switching

The next section looks at the incentives that could encourage the drivers to make the switch to EVs. Figure 16 includes a breakdown of the popularity of the incentives, ranked with the most popular (those that selected 'yes') at the top in blue.

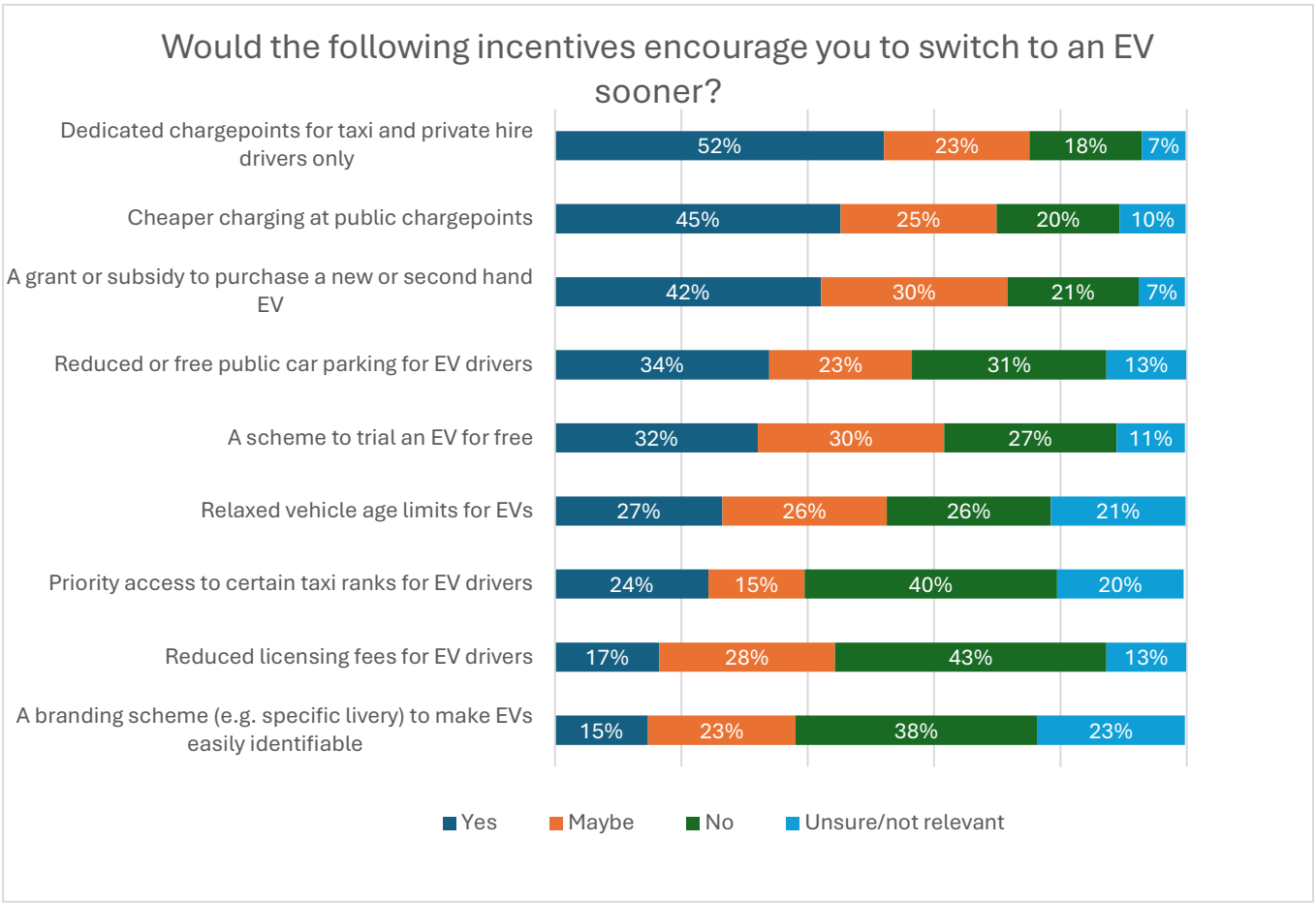

Figure 16: A summary of the incentives that may encourage drivers to make the switch to EVs.

This question received 230 responses, of which over half (52%) stated having dedicated chargepoints for taxis and private hire drivers would incentivise them to make the switch. This incentive also received the least amount of 'no' responses too, at just 18%. It is surprising that the most popular incentive isn't related to financial support, as this was the largest barrier previously identified. This incentive may indicate the drivers concerns over the availability of chargepoints and being able to access a chargepoint when needed, which links back to range anxiety, as mentioned in section 3.2.

The next three most popular incentives are relating to financial incentives, ranging from cheaper charging, to a grant, and reduced or free public car parking for EV owners.

4.3.4 Agreement with EV statements

Drivers were asked whether they agree or disagree to nine statements relating to EVs, the results are explained in Figure 17.

83% of drivers agreed that ‘electric vehicles that are suitable for me are too expensive’, this supports the 71% of respondents that indicated this was a significant barrier in making the switch to EVs, as outlined in section 3.2.

The second highest response received 76% of drivers stating ‘there are currently not enough places to charge an electric vehicle’, closely followed by the third highest response of ‘electric vehicles cannot drive far enough on a single charge’. Similarly, both statements support the most popular and third most popular barriers selected by the drivers in section 3.2. As the results support the other answers provided in the survey, it emphasises the consistency and accuracy of responses, and the challenges involved for the drivers.

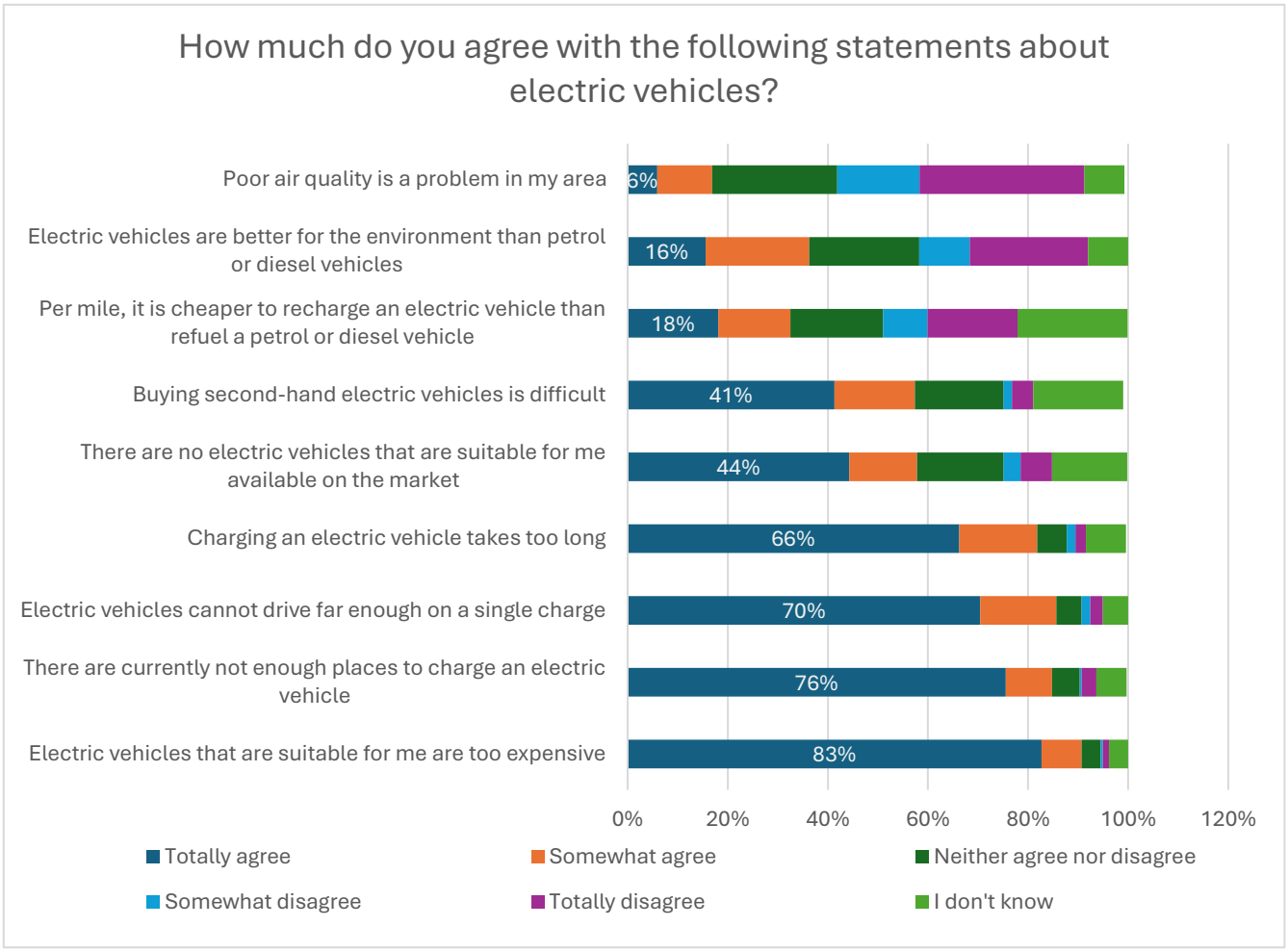

Figure 17: The responses to the question: how much do you agree with the following statements about electric vehicles?

5 Existing policies in Suffolk to promote low emissions from fleet

All Suffolk Councils have a taxi licensing policy specific to their area. As part of this study, all policies were explored to gain an understanding of the requirements for the taxi and PHV trade in their areas, and to identify any support in helping the transition to EVs.

Table 3 shows a breakdown of whether the existing taxi policies for all Districts includes any vehicle age limits to encourage newer, and therefore less polluting vehicles, and if they actively encourage the uptake of EVs to their drivers.

Council	Vehicle age limits to encourage uptake of newer vehicles	Encourage/support the uptake of electric vehicles
West Suffolk	Y	Y
East Suffolk	X	Y
BMSDC	Y	Y
Ipswich Borough	Y	X

Table 3: Breakdown of any encouragement/support for taxi and PHVs to make the transition to electric vehicles.

Several of the policies include a statement relating to improved air quality and encouraging drivers to switch off engines when stationary or idling, particularly at taxi ranks.

West Suffolk Council[10] states they fully support the use of vehicles that use cleaner environmentally friendly fuels, such as hybrid or EVs. Babergh[11] and Mid Suffolk[12] District Councils state they strongly recommend new, or replacement vehicles to be either hybrid or EV, with other fuelled vehicles to be considered on a case-by-case basis.

Ipswich Borough Council[13] mentions future revisions to their 2022-2025 licensing policy are likely to include requirements for vehicles licensed as taxi and private hire in Ipswich to be zero or extremely low carbon emission.

East Suffolk Council[14] do not include a requirement for, or reference of, low emissions vehicles in their taxi licensing policy, but the council does encourage/support the uptake of electric vehicles through a discount on licences for hybrid and EVs[15].

[10] West Suffolk Council Hackney Carriage and Private Hire Licensing Policy
[11] taxi-and-private-hire-policy-2022-25-babergh-
[12] taxi-and-private-hire-policy-2022-2025-mid-suffolk- (midsuffolk.gov.uk)
[13] taxi_policy_sep_2022.pdf (ipswich.gov.uk)
[14] Suffolk Coastal District Council (eastsuffolk.gov.uk)
[15] Fees and charges 2024-25 - Final 16.04.24.xlsx (eastsuffolk.gov.uk)

5.1 Example policies from other Local Authorities in the UK

A number of Local Authorities (LA's) across the UK have trialled and implemented policy changes to support the taxi trade in the transition from ICE vehicles to electric. Four examples are shown below from urban and rural areas in England.

- **Coventry City Council** have introduced a 'Go Electric Taxi' initiative[16], including:
  - Extended test drives
  - A £2,500 incentive for the first electric taxi orders
  - Free electric charging during the trail and
  - Zero-commission fares on taxi app bookings

- **Cambridge City Council** includes 'the promotion of environmental sustainability' as a key objective in their taxi licensing policy[17], with the following implementations:
  - License fee exemption for zero emission vehicles, and a 50% license fee discount for ultra-low emission vehicles
  - Extended age limit for zero emission vehicles of up to 15 years, and up to 12 years for ultra-low emission vehicles
  - By December 2028, all licensed Saloon vehicles to be zero or ultra-low emission vehicles
  - By December 2028, all WAVs to be ultra-low or zero emission as and when the market allows (to be reviewed in 2026)

- **Bradford Metropolitan District Council** have offered grants up to £6,000 for non-wheelchair vehicles and £10,000 for wheelchair accessible vehicles (WAVs), over 2 years[18].

- **Torbay Borough Council** has proposed the implementation of licensing only new 100% electric vehicles from 1 May 2030[19]. The proposal will be reviewed in 2027 to ensure that the charging infrastructure is in place in Torbay, and/if alternative fuel sources have come onto the market which could be considered for licensing.

The taxi and PHV statistics from DfT indicate over the period from 2020 to 2024, the proportion of taxis using petrol and diesel in England has fallen from 89% to 71%, with hybrid vehicles more than doubled from 10% to 28%, and the proportion of EVs increased four-fold from 0.2% to 0.9%. This is a similar picture for PHVs, where petrol and diesel vehicles have fallen from 65% to 46% of the fleet over the same period, closely followed by an increase in hybrid vehicles from 34% to 44%, and EVs have increased ten-fold from 0.8% to 8.8%.

Although the reasons behind this shift are not mentioned in the DfT report[20], we are starting to see an increase in the number of EV and ultra-low emissions vehicle policies implemented for the taxi and PHV trade in the England, suggesting the new policies are an important method in beginning to influence fuel type changes within the trade.

[16] Coventry cab drivers get extra incentives to 'go electric' (evfleetworld.co.uk)
[17] Hackney Carriage and Private Hire Licensing Policy - Cambridge City Council
[18] Bradford Council Offers Grants of Up to £10k to Taxi Drivers Switching to EVs (prodrivermags.com)
[19] hc-and-ph-licensing-policy-may-edition.pdf (torbay.gov.uk)
[20] Taxi and private hire vehicle statistics, England, 2024 - GOV.UK (www.gov.uk)

6 Options to support the transition to EVs

Using the data provided in this report, options are included below that may support the trade and provide opportunities to help them transition to EVs.

Options for encouraging the transition to EVs

Research[21] has shown that policy options and incentives have an important role in encouraging the transition to EVs. Suffolk Councils, working closely with taxi and private hire operators and businesses, have an opportunity to enable Suffolk to lead the way in low emission vehicle fleet operations. Options chosen will depend on funding and decisions made at a County and District or Borough level, therefore the options outlined below are suggestions and are not definitive actions at this stage.

SCC refers to Suffolk County Council, D and B are the (Suffolk) Districts and Borough, SCCEEB is the Suffolk Climate Change, Environment and Energy Board.

Behavioural change:

Option	Lead	Collaborators
Frequent engagement with the trade to help understand and monitor ongoing barriers/challenges/feedback	SCC	D and B
Explore a behaviour change approach to EV adoption[22]	SCC	D and B
Identify drivers that have already made the switch to become 'champions/case studies' within the trade	D and B	SCC
'Try before you buy' scheme – partner with a commercial company to enable a trial period for drivers to test the cars and their suitability	SCC	D and B, commercial providers
For taxi/private hire drivers that complete journeys on behalf of Suffolk Councils, explore loaning an EV to assess suitability	SCC	D and B
To include a taxi element for EVEX2025 to enable drivers to try a range of vehicles and talk with suppliers	SCC	EV Driver (event organiser), D and B
The creation of an online resource to share information to the taxi trade: - Ensure drivers are aware of the charging infrastructure in Suffolk - Raise awareness of the growing second-hand market for EVs and where to source them - Raise awareness of Government Plug-in Taxi grant available to taxi drivers and any associated support with home charging (currently valid until April 2025)	SCC	D and B

[21] (PDF) Moving a Taxi Sector to Become Electric: Characterizing Taxi Drivers Interested in Purchasing a Full Electric Vehicle (researchgate.net)

[22] Driving and accelerating the adoption of electric vehicles in the UK (publishing.service.gov.uk)

Infrastructure improvements:

Option	Lead	Collaborators
Provide dedicated taxi rapid charge points close to taxi stands/ranks	D and B	Chargepoint operators, SCC
EV only taxi stands/ranks	D and B	Chargepoint operators, SCC
Encourage uptake of cross pavement channel solutions (may require financial incentives) to allow charging at home where no off-street parking exists, allowing cheaper electricity tariffs to be utilised	SCC	D and B
Encourage uptake of home chargers (e.g. financial incentives)	D and B	SCC

Financial support:

Option	Lead	Collaborators
Explore grant support of between £5,000-£10,000 to complement the Government Plug-in Taxi grant[23]	D and B, SCCEEB	
Provide a loan scheme for switching (Scotland previously had such a scheme[24]	SCCEEB	D and B
Grants to contribute towards home charging capability (chargers, pavement channel solutions)	D and B	SCC
Cheaper charging for taxi drivers at certain chargepoints close to taxi ranks	D and B	SCC
Put in place a scheme such as Uber with their 'Powering up' package[25] and charging bundle[26]: - Work with suppliers to provide discounted vehicles e.g. Kia, MG etc or discounted home chargers with Octopus - Grant of £5,000 - Introductory discount for commercial EV charging (BP Pulse with value £750)	D and B	SCC, commercial provider

[23] Plug-in taxi grant: eligibility and applications - GOV.UK
[24] Switched on Taxis Loan
[25] Helping you upgrade to an electric vehicle in London | Uber
[26] Octopus Energy powers Uber drivers with free EV chargers and cheaper charging | The UK Charging Infrastructure Symposium

Licensing Policy:

Option	Lead	Collaborators
Specify that from 2026 all new vehicles should be EVs – i.e. giving advance notice of the policy change requirement	D and B	SCC
For new contracts for home to school or other SCC provided travel, specify the use of an EV as required	SCC	D and B
Due to the current limitations on sourcing suitable and affordable e-WAVS, Suffolk Councils could look to relax age restrictions on new licences for hackney carriage and PHVs for any WAV vehicles that are electric or ultra-low emission	D and B	SCC
Extend renewal times from 5 to 7 years for vehicles (not just e-WAVs)	D and B	SCC

For any option(s) taken forward, it is recommended it should be introduced as a pilot first, to test the suitability and uptake before rolling out further. It is important to ensure engagement and consultation with drivers takes place throughout this process, whilst monitoring feedback and EV uptake data to help shape and improve interventions. Suffolk County Council is liaising with other LA's delivering similar work with their taxi trades, to share learning and best practice.

The next steps in which Suffolk County Council, the Districts and Borough should take to support the transition to electric, include:

1. The SLOG members and Suffolk County Council to work together to consider the options for implementing policy changes identified in Section 6.

2. SCCEEB (Suffolk County Council on behalf) should explore the opportunity for incentive packages as outlined in Section 6.

3. EV Experience Day 2025 (EVEX25) to have a focus on enabling the taxi and PHV drivers to experience and test drive electric taxi's, talk to the suppliers and to understand the support available to help them transition to EVs.

4. As the Local Transport Authority, Suffolk County Council should consider supporting the taxi and PHV trade in transitioning to electric in the Area Based Plans.

7 Summary and recommendations

The findings included in this report provide Suffolk Councils with an insight into opinions, barriers and challenges faced by the taxi and private hire trade with transitioning from ICE vehicles to EVs. The benefits of this are twofold. Firstly, to reduce tailpipe emissions and improve air quality. Secondly to decarbonise the fleet and reduce their impact on climate change. These two outcomes support the Suffolk Air Quality Strategy and the Suffolk Climate Emergency Plan.

The Suffolk-wide fleet profile provides baseline data into the current make-up of the fleet (as of June 2024), with our aim of repeating the analysis within the next two years to monitor and assess any changes and progress. It is hoped any new interventions will be in place within this timeframe, to begin the transition and to enable changes to take place.

Various barriers and concerns to EV uptake have been acknowledged, including concerns over the cost of the vehicles, the vehicle range, and the level of charging infrastructure in Suffolk. The consistency in responses with the BMSDC survey from 2022 suggests driver views and barriers have not changed over the last two years, likely due to there being no incentives or limited support for them to make the switch.

Research[27] has shown that policy options and incentives provide an important role in encouraging transition to EVs. To see a reduction in the 81% of diesel vehicles used by the trade in Suffolk, and an increase in the 15% of hybrid vehicles and 1% of EVs used (as identified in Figure 3), policy changes and incentives will need to be introduced to support the trade in making the transition.

Suffolk Councils, working closely with taxi and private hire operators and businesses, have an opportunity to enable Suffolk to lead the way in low emission vehicle fleet operations. The options chosen from Section 6 will depend on funding and decisions made at a County and District or Borough level.

Several options are provided that cover financial, behavioural, infrastructure improvements and changes to licensing policies.

The following key recommendations and next steps will support the taxi and PHV trade in making the transition to electric.

1. The SLOG members and Suffolk County Council to work together to consider the options for implementing policy changes identified in Section 6.

2. SCCEEB (Suffolk County Council on behalf) should explore the opportunity for incentive packages as outlined in Section 6

3. EV Experience Day 2025 (EVEX25) to have a focus on enabling the taxi and PHV drivers to experience and test drive electric taxi's, talk to the suppliers and to understand the support available to help them transition to EVs

4. As the Local Transport Authority, Suffolk County Council should consider supporting the taxi and PHV trade in transitioning to electric in the Area Based Plans

[27] (PDF) Moving a Taxi Sector to Become Electric: Characterizing Taxi Drivers Interested in Purchasing a Full Electric Vehicle (researchgate.net)

Appendix 1 - Suitable alternative EV models for taxi and private hire drivers (as of August 2024)

Vehicle make and model	Price	Battery capacity (kWh)	Real Range Estimation (weather dependent)	Rapid charge time	CO_2 emissions
Citroen e-C3 	£21,990	44.0 kWh	110 - 245 mi	50 kW charger: 49 min 100kW charger: 32 min	0g/km
Nissan Leaf 	£28,495	39.0 kWh	105 - 220 mi	46 kW charger: 43 minutes	0g/km
MG MG4 EV Long Range 	£29,495	61.7kWh	160 - 330 mi	50 kW charger: 55 min 150 kW charger: 24 min	0g/km
MG MG5 EV Long Range 	£30,995	57.4 kWh	145 - 310 mi	50kW Charger: 63 min 100 kW charger: 42 min 150kW charger: 42 min	0g/km
Volkswagen I.D 3 Pro 	£35,700	59.0 kWh	155 - 325 mi	50kwh charger: 58min 100 kW charger: 33 min	0 g/km
Kia Niro EV 	£37,295	64.8 kWh	170 - 360 mi	50 kW charger: 64 min 80KW charger: 41 min	0 g/km

Larger Capacity Vehicles:					
Citroen e-Berlingo M 50 kWh 	£30,990	50.0 kWh	100 - 220 mi	50 kW charger: 49 min 100 kW charger: 28 min 100 kW charger from charges from 0 % to 80%: 30 min	0 g/km
Peugeot e-Rifter Standard 50 kWh 	£32,230	50.0 kWh	100 - 215 mi	50 kW charger: 49 min 100 kW charger: 28 min 100 kw charger charges the battery from 0 to 80 %: 30 min	0g/km
Vauxhall Combo Life Electric 50kWh 	£32,180	50.0 kWh	100 - 220 mi	50kW charger: 49 mins 100kW charger: 28 min 150kW charger: 28 min	0g/km
Peugeot e-Traveller Standard 75 kWh 	£48,995	68Kwh	110-240 mi	50kW charger: 75 min 100kW charger: 38 min	0g/km

LEVC TX Icon 	£66,756	31 kW	78 miles	7kW charger: 3hrs 45 mins 11 kW charger: 2 hrs 20min 50kW charger: 30 mins	0g/km
LEVC TX Vista 	£69,702	31kW	60 miles	7kW charger 3 hrs and 45 mins 22kW charger: 1 hr and 15 mins 50kW charger: 30min	0g/km

All information in the table is sourced from the EV Database UK[28].

Indication of real-world range is broken down into cold weather: 'worst-case' based on -10°C and use of heating, mild weather: 'best-case' based on 23°C and no use of A/C. The actual range will depend on speed, style of driving, weather and route conditions, therefore the information in the table should be used as a guide only.

The speed of charge figures should be used as guidelines only. It should be noted it is best to keep the state of charge largely between 20-80% when possible, to help look after the battery. Having said this, it is perfectly fine to charge up to 100% when required, just note the time it takes to charge from 80-100% is likely to be slower as part of the car's battery management system.

As with all vehicle purchases, it is important to choose a vehicle that is fit for purpose for the user, and to explore the range, cost, size and any associated running and maintenance costs specific to the vehicle. The manufacturer will be able to provide this information.

[28] Compare electric vehicles - EV Database UK

Appendix 2 – Indicative running and maintenance costs

Running costs

With regulator Ofgem's 1 October 2024 energy price cap limiting the cost of electricity to 24.5 pence per kWh, fully charging an EV at home can cost approximately £8 for a small EV through to £15 for a large EV[29]. Assuming a range of 200 miles on a full charge, it works out approximately between four and eight pence per mile.

The figures in Table 1 indicates the average fuelling and charging costs for petrol, diesel and electric vehicles as of October 2024. The taxi and PHV fleet in Suffolk drive on average 22,916 miles a year, therefore the total estimated costs in Table 1 cover this mileage.

Vehicle type	Petrol	Diesel	EV (charging exclusively at home)
Small car	£2,520.76	£1,604.12	£916.64
Medium car	£3,208.24	£2,062.44	£1,374.96
Large car	£4,124.88	£2,749.92	£1,833.28

Table 1: Estimated cost comparison of covering 22,916 miles a year between fuelling ICE vehicles and charging an electric vehicle exclusively at home.

Charging an EV at home is significantly cheaper than refuelling petrol and diesel vehicles. Some energy suppliers offer energy tariffs specifically for EV owners that use their home electricity to charge their car, including cheaper rates when charging during off-peak hours, such as 7 pence per kWh when charging overnight with Octopus Energy. Another option is to have add-on tariffs that enable a cheaper rate to charge at anytime[30], such as OVO Energy where it is 7 pence per kWh to charge your vehicle using the greenest times for the grid[31]. Both options can help save £100s a year compared to sticking with a standard energy tariff.

However, not all drivers will have the ability to charge at home if they do not have off-street parking, as highlighted in Section 4.1.3, where 25% of drivers in Suffolk rely on on-street parking.

Without the ability to charge at home, drivers will have to rely on the public network to charge their vehicles.

	Slow/Fast <50kWh	Rapid/Ultra-Rapid >50kWh
Price index from September 2024	56p/kWh	80p/kWh
Total cost to cover 22,916 miles	£3,895.72	£5,499.84

Table 2: Estimated EV charging cost comparison between using a slow/fast charger and a rapid/ultra-rapid charger, covering 22,916 miles a year.

[29] Does It Cost More To Run An EV Or An ICE? – Forbes Advisor UK
[30] Electric vehicle energy tariffs - Money Saving Expert
[31] Charge Anytime EV add-on | EV tariffs upgrade | OVO (ovoenergy.com)

Table 2 shows the average price, as of September 2024, for charging an EV on the public charging network using a pay-as-you-go plan[32]. ZapMap indicates that if using an average efficiency EV, this equates to 17 pence per mile using a slow/fast chargepoint and 24 pence per mile using a rapid/ultra-rapid chargepoint.

Using the same annual mileage of 22,916 miles, the total costs were calculated and suggest a significant increase in charging costs when exclusively using the public network over home charging. As the price index in Table 2 represents a pay-as-you-go plan, it is possible to lower this cost by having a subscription to specific chargepoint operators, although this will still cost more over home charging.

Some car parks in Suffolk currently offer free EV charging, including Crown car park, Upper Orwell Street North and Elm Street car parks (as of October 2024). The chargepoints are a standard speed at 7kw, meaning it will take longer to charge but it can help save a significant amount of money. Some supermarkets also offer free EV charging.

As EV uptake rises and competition on the public network increases, it will drive down the cost of public charging. This is already being seen with Tesla opening up some of their chargepoints to all EVs and Gridserve offering various discounts to customers. This competition is expected to continue across all operators, therefore lowering the costs further for customers.

It is important to note that although the estimated costs in Table 2 are higher than the costs to refuel a petrol or diesel vehicle, this is a worst-case scenario and there are options available to lower the costs whilst still using the public charging network.

Maintenance costs

Electric vehicles have far fewer moving parts than ICE vehicles, meaning they generally have lower service, maintenance and repair costs. This is only the case for battery electric vehicles, as plug-in hybrids have an engine as well as a battery, therefore their maintenance is similar to an ICE vehicle as they still operate components like exhausts, clutches and gear boxes, for example.

The cost to service an electric car is approximately £143.75, whereas the average service cost for an ICE vehicle is approximately £174.23, around 18% more[33]. The cost for an EV service stays very similar each time unlike an ICE car, where you're likely to receive higher servicing costs e.g. when needing to change the cambelt. The costs involved with this vary depending on the vehicle make and model, but on average it can be between £200-£600 for the parts, and once labour costs are added the end bill could be more towards £1,000[34], which is significantly higher than EV servicing costs.

Although the servicing costs are lower, electric vehicles do still require some regular maintenance costs as any vehicle does, such as tyres and brakes (although due to regenerative braking on an EV, the brake pads can last much longer than in an ICE car[35]), general wear and tear, windscreens, wiper blades and washer fluid and on some occasion battery repair or replacement[36] and accident repairs.

[32] Zapmap Price Index - Average weighted price to charge on the public network - Zapmap (zap-map.com)
[33] Electric Car Maintenance Costs | Pod Point (pod-point.com)
[34] What is a cambelt and how do you replace it? | RAC Drive
[35] Do EVs produce more pollution? | RAC Drive
[36] The difference in costs between an EV and an ICE | Ayvens Portugal - formerly LeasePlan

Currently most manufacturers offer a five to eight-year warranty on EV batteries, or 100,000 miles, whichever comes first. When looking at the average annual mileage for a Suffolk taxi driver, this would cover them for just over a four-year period.

If the batteries are well looked after by keeping the state of charge largely between 20-80% and only using rapid/ultra-rapid charging when needed, then the current estimate is the batteries will last between 10 to 20 years before needing to be replaced[37]. This has been evidenced in a study of 15,000 EVs by Seattle battery analysis company, where they found that only 1.5% of batteries had been replaced under warranty[38].

Another cost to consider is Vehicle Excise Duty (VED) charges, also known as road tax. Battery electric vehicles are currently exempt from paying road tax and Plug-in hybrids currently pay a reduced amount, which is a significant saving; although this will be changing from April 2025.

Charging at home can bring increased costs if installing a chargepoint but reduced electricity costs, but this option isn't always required. For those that have off-street parking, some rely on using a 3-pin plug to charge at home. This minimises any additional costs associated with a home chargepoint installation which can save a significant amount of money, although charging this way can be very slow.

Alternatively, many EV drivers rely on the public network or to use a chargepoint at their place of work. This option also saves on any costs associated with the home charger installation.

Installation of a home chargepoint is likely to cost between £800-£1,000, depending on who installs it and the model chosen. Although this is an upfront investment, having a home chargepoint can be seen contributing to make the house more saleable should the next prospective owner have an EV, therefore bringing additional benefits. Ultimately, the preferred charging method depends on the individual user and their charging needs.

Another cost involved is insurance. The insurance costs for electric vehicles are typically around 12% higher over the ICE vehicle equivalents, largely due to electric vehicles being higher cost to both buy and repair, therefore insurance providers charge more for coverage[39]. The higher purchase and repair costs are expected to reduce with time as EV uptake increases and vehicle cost and repair costs decrease.

In summary, while capital costs for an EV may be higher than an EV the cost over ownership lifetime needs to be taken into account for drivers. This is important as the maintenance costs of an EV are mostly cheaper than their ICE vehicle equivalents, although like any vehicle, there will still be general wear and tear costs. The lower costs and extended warranty for batteries are financially beneficial when it comes to transitioning to an EV, and greater savings can be made if home charging is an option.

[37] EV Batteries – How Much Do They Cost and How Often Do They Need Changing? – Help & Advice Centre | RAC Shop

[38] Little Book of EV Myths | Fair Charge

[39] Comparing costs of EVs vs ICE vehicles | LeasePlan Sweden