

# Sharing the load

“green alliance...”

The potential of e-cargo bikes



## Sharing the load

The potential of e-cargo bikes

By Johann Beckford

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## About this project

This report was produced as part of Green Alliance's work programme on decarbonising transport, supported by the Quadrature Climate Foundation.

The research was based on focus groups and interviews conducted by Britain Thinks on behalf of Green Alliance during September 2022. The focus groups included e-cargo bike users and tradespeople who currently use vans in their work. Interviews with fleet operators were also conducted.

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# Summary

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**The number of vans on the road has doubled over the past two decades.”**

The number of vans on the road has almost doubled over the past two decades and their greenhouse gas emissions have increased 56 per cent since 1990.<sup>1,2</sup> New policy is urgently needed to get vans on the right road to net zero.

The strategy to reduce van emissions will be a combination of electrification and switching to other modes of transport. While electric vans are slowly being adopted, there is still a long way to go, with just over 31,000 electric vans across a fleet of over 4.6 million vehicles.<sup>3</sup> Pressure for more services and deliveries is on the rise, as the sharp rebound in van miles driven after the Covid-19 lockdowns has shown.<sup>4</sup>

Electric cargo bikes, popularly known as e-cargo bikes, are an emerging option. With the ability to carry up to 300kg in weight and much lower carbon emissions, they can be an alternative to vans in certain contexts. Within cities, good cycling infrastructure can facilitate direct journeys, and they can be parked more easily than vans. In some urban areas, these factors add up to faster journeys and higher productivity: appealing for many van drivers and business owners across the UK.

Despite these benefits, e-cargo bikes are far less visible in the UK than in other European countries.<sup>5</sup>

In this report, we focus on the main uses of vans ie to transport materials, tools and equipment.<sup>6</sup> Too often,

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tradespeople and fleet operators are not part of discussions about future mobility solutions. We sought to address this by involving them, along with e-cargo bike users, in focus groups and interviews to understand better what policies could lead to more e-cargo bikes on the road.

Our research indicates a lack of awareness of the potential of e-cargo bikes. Instead, there is an assumption across the groups we spoke to that electric vans will be the main solution to reduce emissions. This openness to switching to greener vans is encouraging and the Department for Transport (DfT) should set ambitious targets under the zero emissions vehicle (ZEV) mandate to stimulate the electric van market.

In our discussions around the potential of e-cargo bikes, commercial opportunities and the drive to address climate change appear to be strong motivating factors for larger fleets to move in this direction. Although there was interest, it was clear that, for sole traders especially, e-cargo bikes are seen as a risk. Greater awareness of their benefits is necessary to boost future uptake.

To accelerate the rollout of e-cargo bikes in the UK the government should:

1. Raise awareness of e-cargo bikes as a viable alternative for a range of jobs.

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2. Explore ‘try before you buy’ opportunities through local authority led rental schemes.

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3. Provide financial support for purchasing, via local authorities, by local tradespeople and businesses.

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4. Improve infrastructure for e-cargo bikes wherever possible.

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# Introduction

“

**Despite reduced traffic during the Covid-19 pandemic, van use rebounded to above pre-pandemic levels by 2021.”**

Vans are the only major domestic mode of transport in the UK where fleet-wide emissions have grown over the past 30 years.<sup>7</sup> Situated within a wider context of the transport system, the largest emitting sector in the economy, this has to be an area of greater focus if the UK is to get on track to meet its legal emissions reduction targets.

In 1990, emissions from UK registered vans stood at 11MtCO<sub>2</sub>e, rising to 18MtCO<sub>2</sub>e by 2019, which is over 15 per cent of surface transport emissions.<sup>8</sup> The number of vans on British roads almost doubled in the past two decades.<sup>9</sup>

Despite reduced traffic during the Covid-19 pandemic, van use rebounded to above pre-pandemic levels by 2021.<sup>10</sup> For much of the past decade, new van registrations remained high, adding to the total number on the road.<sup>11</sup> Continued growth in online shopping is also increasing the number of deliveries.<sup>12</sup> With these changing travel patterns, attention must focus on how to decarbonise van journeys if the UK is to bring down its high transport emissions and meet its legal climate targets.

## The UK van fleet

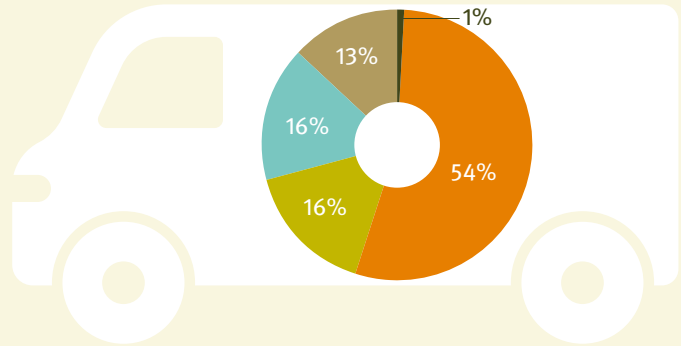
There are 4.6 million vans in the UK.<sup>13</sup> It is important to understand what they are being used for to establish how to apply technological and behavioural solutions to bring down carbon emissions. A 2019 government survey showed that most vans (54 per cent) are used for carrying equipment, tools or materials. But on a miles driven basis that share rises to 61 per cent.<sup>14</sup>

When it comes to van keepers registering vehicles for tax purposes, the majority are businesses (76 per cent) although there are still a significant number of private keepers (24 per cent).<sup>15</sup> These figures demonstrate there is a need to focus decarbonisation efforts on vans that store and transport materials, tools and equipment.

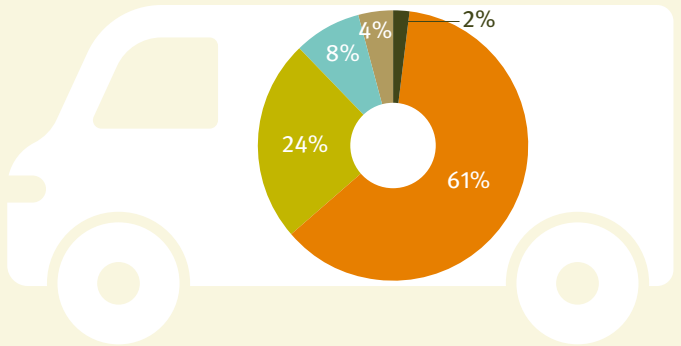
“  
There is a need to focus decarbonisation efforts on vans that store and transport materials, tools and equipment.”

Most vans and their mileage are for carrying equipment, tools or materials

Proportion of vans by primary usage, 2019-20



Proportion of van mileage by primary usage, 2019-20



- Carrying equipment, tools or materials
- Delivery and collection of goods
- Private and domestic non-business use
- Recreational and leisure and holidays
- Providing transport to others

## Going electric

Electric vans are increasingly sought after. As of September 2022, there were just over 31,000 on UK roads, an increase of just over 13,000 in under a year.<sup>16</sup> And they are consistently reaching five to eight per cent of total new sales.<sup>17</sup>

Electric van sales rose almost six fold between 2020 and 2022

	UK electric vans	Total UK vans
2020	5,266	4,348,382
2021	18,025	4,540,907
2022 (latest figures)	31,090	4,613,316

Although the sales figures are picking up, they are still significantly short of the progress being made in the car market. In 2018-19, new electric car and van sales in the EU were comparable. But, following different fleet-wide CO<sub>2</sub> targets for cars and vans being introduced across the EU in 2020-21, electric car sales climbed rapidly while electric van sales were slower in comparison. This impact was also reflected in the UK market.<sup>18</sup>

This shows the impact government policy has on the market. The UK is consulting on a new zero emissions vehicle (ZEV) mandate, where car and van manufacturers will be given targets on the proportion of their sales which must be fully zero emission. With a ZEV mandate, the government hopes to speed up the transition of all electric vehicles and bring electric van sales back in line with cars over time. But the current state of the market, with a relatively small proportion of electric vans, means other modes of transport need to be considered to cut surface transport emissions. (For more about our research insights on electric vans, see annex two on page 21).

## Modal shift

One difficulty in shifting away from vans to other modes of transport is what the vehicles are used for. Carrying equipment or products for storage or delivery requires a sizeable payload, which many other forms of transport cannot provide. Moreover, vans are flexible in that they can



“**Since 2020, the variety and number of deliveries taking place using e-cargo bikes has grown rapidly.**”



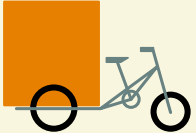


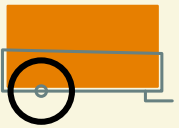
travel directly to depots as well as to the doorstep, which is not possible with other alternatives, like trains.

One transport mode, which gained greater traction during the Covid-19 pandemic, is the cargo bike. According to the Cycling Embassy of Great Britain, this is “a catch-all term for a wide variety of adapted cycles, designed for carrying heavy or bulky loads, or passengers, including children. They can come in either two-wheeled, three-wheeled, or four-wheeled form, with or without e-assistance.”<sup>19</sup>

Taking into account the distances and payloads involved, we focused our study on the potential of e-cargo bikes to replace vans.

Since 2020, the variety and number of deliveries taking place using e-cargo bikes has grown rapidly. According to bike delivery website ‘Brought by bike’, set up during the Covid-19 lockdowns, 450 delivery services, shops and tradespeople deliver a range of products or services to the doorstep by bike.<sup>20</sup>

#### Cargo bike types and capacities (mostly e-bikes)

 <p><b>Messenger bike</b> Payload: 20-40kg 0.03-0.05m<sup>3</sup> Width: 50cm</p>	 <p><b>Rear-load cargo bike</b> Payload: 100kg 0.4-0.8m<sup>3</sup> Width: 50cm</p>	 <p><b>Rear-load cargo trike</b> Payload: 200-300kg 0.5-1.5m<sup>3</sup> Width: 80-120cm</p>
 <p><b>Front-load cargo bike</b> Payload: 100-125kg 0.1-0.7m<sup>3</sup> Width: 50-90cm</p>	 <p><b>Front-load cargo trike</b> Payload: 100-200kg 0.2-0.6m<sup>3</sup> Width: 80-90cm</p>	 <p><b>Trailer</b> Payload: 60-150kg 0.2-2.1m<sup>3</sup> Width: 80-110cm</p>

E-cargo bikes come in many different shapes and sizes with the ability to carry everything from tools and equipment to food, drink, medicines and even children or pets. Payloads range, depending on models, from 20kg to 300kg.<sup>21</sup> Electrical assists speed up trips and open up use in difficult terrains or adverse weather conditions.

“

**A European study shows that up to 7.5 per cent of urban traffic mileage could be replaced with e-cargo bikes.”**

Most studies of e-cargo bikes tend to focus on deliveries in urban areas where they offer significant potential to cut both greenhouse gas and particulate emissions compared to diesel vans. Passenger and cargo service provider Pedal Me calculates that deliveries using its e-cargo bikes are over eight times cleaner per kilometre.<sup>22</sup> This even includes the additional food required to feed riders, alongside manufacturing and use emissions.

There are commercial benefits as well. Following analysis of GPS tracking of Pedal Me riders, and comparisons with modelled van routes, a study by the organisation Possible found that delivery times of e-cargo bikes in London were quicker than vans.<sup>23</sup> Use of cycling infrastructure to circumvent traffic, the ability to access different routes and less time spent parking were all cited as reasons why deliveries were faster.

Other research reveals that e-cargo bikes can reduce van use in urban areas. For example, a European study shows that up to 7.5 per cent of urban traffic mileage could be replaced with e-cargo bikes.<sup>24</sup> In the Netherlands, approximately 60 per cent of inner city deliveries from logistics company DHL are made using e-cargo bikes.<sup>25</sup> Some local trials are taking place in the UK, including a year long trial delivering goods to Bristol hospitals.<sup>26</sup>

### Understanding the opportunities: our research

We wanted to understand the opportunities and barriers for van users who would not typically choose an e-cargo bike.

In September 2022, Britain Thinks conducted three sets of focus groups and in-depth interviews on behalf of Green Alliance. Due to the importance of vans for carrying equipment, tools or materials, we chose to focus this work on tradespeople and fleet operators. As part of our participant selection, we excluded those more inclined to use e-cargo bikes to gain better understanding of those who were less attracted to them.<sup>27</sup>

Before engaging with the tradespeople and fleet operators, we held focus groups with current e-cargo bike users to widen our general understanding of the issues for discussion. Although not specifically designed to test attitudes to electric vans, this also provided some insights into their use.

# Attitudes to e-cargo bikes

During our focus groups, participants shared their experiences of using vans and e-cargo bikes.

## What our participants said

Vans are versatile, good for marketing and reliable 

Pros ← → Cons

<b>Versatility</b> With long range capability, vans, can take large loads and be used for a wide variety of professional tasks	<b>Security</b> While users think vans are relatively safe and secure, having company logos on a vehicle is seen as an advert to thieves	<b>Cost</b> Including fuel, tax, insurance, vans are not cheap to run and, for sole traders especially, vans often account for a sizeable proportion of regular expenditure
<b>Advertisement</b> A van looks professional and represents the company	<b>Convenience</b> As well as facilitating core business functions, vans provide space to work in, a level of comfort and shelter from weather	<b>Parking</b> This adds time and cost onto projects
<b>Reliable and practical</b>		<b>Carbon footprint</b> A minority raised pollution as a concern

E-cargo bikes are time saving, good for marketing, eco-friendly and economical 

<b>Time saving</b> Quicker when navigating traffic in urban areas	<b>Security</b> While some e-cargo bikes are small enough to bring indoors, others need to be parked on the street which exposes businesses to theft
<b>Parking</b> Easier to find parking due to smaller size	
<b>Advertisement</b> E-cargo bikes are uncommon and attract attention, which boosts business	<b>Forward planning</b> With smaller capacity than a van, e-cargo bike users need to plan more how to transport tools and materials in their vehicles
<b>Eco-friendly</b>	
<b>Good value</b>	

“

**Some of the benefits identified by e-cargo bike users directly address van drivers' concerns about their vehicles.”**

These results show some clear shared benefits between vans and e-cargo bikes. Both are useful as a marketing tool, helping a business or tradesperson to stand out from the crowd. Furthermore, some of the benefits identified by e-cargo bike users directly address van drivers' concerns about their vehicles. Cost, parking and environmental issues were all seen as benefits of e-cargo bikes and drawbacks of vans, suggesting that moving to e-cargo bikes could be a good switch for some van users.

However, shared concerns remain. Both van and e-cargo bike users worry about security, as thieves steal equipment from both.

## Hammersmith Heating: a convert to e-cargo bikes



“I can get to a range of jobs more quickly than I used to.”

Shane Topley is a self-employed plumber based in West London. Shane used to use a diesel van for his work but when the Covid-19 lockdown hit, he started to look at alternatives. He spoke to CarryMe Bikes who asked in detail about his needs before renting different bikes to test out what worked best for him and his business.

Shane now uses two e-cargo bikes regularly which cater for approximately 95 per cent of his work. Switching to an e-cargo bike has involved some more planning of trips but, according to Shane, this is no bad thing. Despite the utility of the e-cargo bikes, Shane still owns a van for longer, out of town trips which would be impractical on a bike.

Shane has become a passionate e-cargo bike supporter:

“I’m no eco-warrior but I really have become a convert. I enjoy cycling past motionless traffic and adopting the bikes means I can get to a range of jobs more quickly than I used to. People are always surprised by how much I can carry on the bike. I can attach a ladder to the outside and carry all the tools I need with me.”

## What people think of e-cargo bikes

A dominant theme of our focus groups with van drivers was around the practicality and flexibility of their vehicles. They spoke about being able to store a variety of equipment and pick up new work at short notice. Vans allow them to work across great distances and attract business.

The tradespeople we spoke to tended to operate over a ten to thirty mile range every day. Some also covered larger distances, up to three hundred miles, at relatively short notice.

E-cargo bike users said they would typically travel ten miles a day. While this suggests the bikes could be used for jobs involving shorter journeys, many sole trader van users were reluctant to consider them, put off by their need to be flexible.

Scepticism around the suitability of e-cargo bikes for the trade environment was a primary concern.

“...on a bike you can cover more ground, especially in built up areas where traffic is a problem... But whether it would work within a trade environment, whether it’s electricians, plumbers, carpenters ... where you have to carry lots of tools, is another story.”

Fleet manager, rural

“I can see it working for different types of businesses, but I think it all comes down to infrastructure.”

Tradesperson, rural



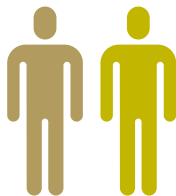
The shift to e-cargo bikes may be best targeted, therefore, at fleets with multiple vehicles, where jobs can be allocated on the basis of distance, with some replacing vans for short work trips. According to 2019 government figures, almost half of fleets (49 per cent) have six or more vehicles and nine per cent have over 100 vehicles, so there is opportunity for some substitution.<sup>28</sup>

“My initial reaction is it is a great idea and I can see the market opportunities for it for urban living environments. The efficiency comes as no surprise whatsoever in environments like London.”  
Fleet manager, rural

“If you turned up to a contract riding one of those I don’t think you’d get a lot of work to be honest.”  
Tradesperson, urban

“The infrastructure in other European countries is better suited...even though it’s a great idea, it’s not safe in the UK.”  
Tradesperson, rural

“It wouldn’t work for me because what you save on fuel and stuff you would lose on productivity.”  
Tradesperson, urban

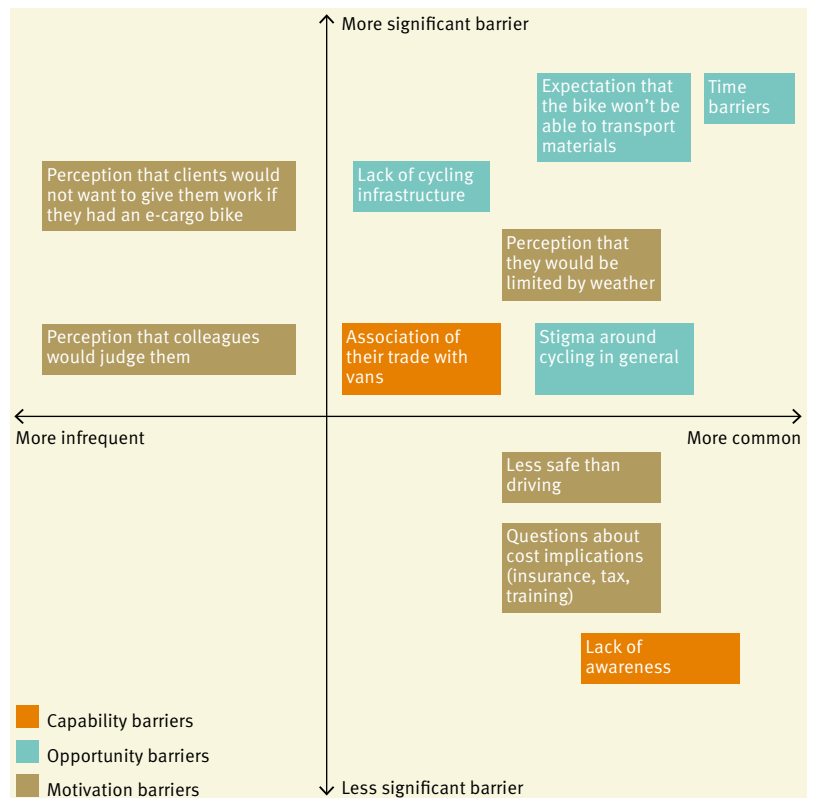


“Common themes included concerns around time, payloads, safety and stigma.”

## Capability, opportunity and motivation barriers

To understand issues raised during our focus groups, we categorised objections to e-cargo bikes into ‘capability’, ‘opportunity’ and ‘motivation’ concerns (as per the COM B behaviour change model, see annex one on page 20). Common themes included lack of understanding and awareness of e-cargo bikes, and concerns around time, payloads, safety and stigma. Below, we plot these concerns against their significance and how often they were raised, to inform our policy recommendations.

Significance and frequency of objections to e-cargo bikes





As this exercise demonstrates, there are several objections that will need action to address, raised on multiple occasions during our study. Opportunity barriers were among the central objections. There were also some that were less significant, such as cost, which could be ‘easy wins’ for the government to tackle in encouraging e-bike use.

**“  
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trades.”**

Ultimately, most of the objections could be resolved by wider visibility of e-cargo bikes across different trades. For example, as trades associated with different tools and equipment begin to use them more, the perception around weight limitation could be reduced. Similarly, the stigma around cycling or the association with certain types of trade with vans could change as e-cargo bikes become more visible. Normalisation would feed into a wider cultural shift in favour of micromobility options, demonstrated by the share of trade transport now conducted on bikes in the Netherlands.

Clearly, time is a challenge for longer journeys. It would not be right to advocate e-cargo bikes for cross country journeys, for which electric vans are the obvious choice (see annex two, page 21 for insight into our participants’ attitudes to switching to electric vans). But, for shorter journeys in urban environments, e-cargo bikes can use cycling infrastructure to avoid traffic and park more easily than vans. The commercial opportunities of these time related benefits should be communicated better.

Alongside the greater visibility of e-cargo bikes, infrastructure investment must keep pace. Attracting more e-cargo bike use depends on good user experiences. More of them on the road could lead to other limitations and increase cycle congestion, which additional infrastructure and investment would help to solve.

## Commercial and environmental benefits

“

**Fleet managers suggested that a rental scheme would help them to switch from vans to e-cargo bikes.”**

During our interviews, fleet managers said potential commercial benefits would make them more likely to consider integrating e-cargo bikes into their operations. Possible evidence, using the Pedal Me fleet, that cargo bikes could complete seven deliveries an hour, compared to four for a van, generated further discussion around commercial opportunities.<sup>29</sup> Some fleet managers were interested in exploring their potential for smaller jobs, such as pricing, and more local work, where e-cargo bikes could take advantage of cycling infrastructure. Those who showed an interest managed fleets ranging from two to ten vans.

As part of this discussion, fleet managers suggested that a rental scheme would help them to switch from vans to e-cargo bikes more easily, allowing them to experiment without having to commit to buying one immediately, as in the example of Hammersmith Heating on page 11.

“I think if you could just rent them rather than buy them it would be a great way to reduce the cost... As we operate all over the country you wouldn't want to take [an e-cargo bike] down the M6 but for us, the ability to hire one locally might be a lot better.”

Fleet manager, urban



## What is the potential to cut emissions?

More work is necessary to establish the proportion of journeys e-cargo bikes could replace, and their potential impact on greenhouse gas emissions. But, a European study suggests that 1.5 to 7.5 per cent of urban motorised traffic could be shifted to e-cargo bikes.<sup>30</sup> If the UK were able to replace urban diesel van journeys with e-cargo bikes at this rate, we estimate the annual carbon saving would amount to 0.35-1.76MtCO<sub>2</sub>e. At the upper end of this range, switching diesel vans to e-cargo bikes could have a greater impact than eliminating all UK domestic aviation emissions.<sup>31</sup>

If the government continues to put forward unambitious van targets in its ZEV mandate legislation, there will be a significant emissions shortfall, compared to the reductions required to meet the CCC's Balanced Net Zero Pathway by 2030.<sup>32</sup> In this case, if e-cargo bikes were used instead of 7.5 per cent of urban vans, they could reduce the emissions shortfall by up to a third, supporting the government in reaching its legally binding climate targets.

**“Switching diesel vans to e-cargo bikes could have a greater impact than eliminating all UK domestic aviation emissions.”**

# Supporting e-cargo bike rollout

“

**Those most interested in e-cargo bikes still need to be convinced before investing.”**

The number of vans on the road and the emissions associated with them keep on rising. A new approach is needed to cut fleet-wide climate impacts. To get road transport onto a more sustainable footing, a mix of switching to alternative modes of transport and technological change will be required.

Our interviews and focus groups with fleet managers and tradespeople helped us to understand the issues they face and their appetite to use e-cargo bikes. From our analysis, we have concluded that four actions from the government could support greater uptake:

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## 1. Raise awareness of e-cargo bikes as a viable alternative

Many tradespeople and fleet managers are unaware of the potential of e-cargo bikes. Promoting them as a viable alternative to vans in appropriate contexts, as part of a targeted information campaign, would increase uptake by businesses and tradespeople in urban areas who could make the most of the benefits. A government demonstrator project would also help to increase the visibility of e-cargo bikes in use.

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## 2. Explore ‘try before you buy’ opportunities through local authority rental schemes

From our consultations, those most interested in e-cargo bikes still need to be convinced before investing. As a solution, a rental scheme was supported by participants.

The Department for Transport should provide financing for rental schemes, to be administered through local authorities. Loans under a rental scheme should run for significant time periods, eg several weeks or even months, to

allow businesses to realise the social, environmental and commercial benefits. Applicants should be asked to give feedback to local authorities about their experiences, as well as the ways in which to improve infrastructure.

“

**The Department for Transport could help to remove some risk by giving purchase assistance grants.”**

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### 3. Provide financial support for purchasing, via local authorities, for local people and businesses

Despite being cheaper than vans, the upfront costs of e-cargo bikes mean they can be seen as a risky investment, until they are proven as a business asset. The Department for Transport could help to remove some risk by giving purchase assistance grants, disbursed by local authorities. These could be a short to medium term step towards raising demand and bringing down prices. Evidence from e-cargo bike users we spoke to showed that, while not all of them had used grants to purchase their bikes, many had required financial support and would otherwise not have made the choice to switch.

Alongside the introduction of policies in many urban areas making driving more expensive, this can be presented as a cost effective opportunity for businesses, as well as responsible climate action.

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### 4. Improve infrastructure for e-cargo bikes

Better infrastructure for e-cargo bikes will improve user experiences and increase their appeal. All road infrastructure changes should consider e-cargo bikes, as some existing cycling provision is still inaccessible to them. Concerns around accessibility and safety were highlighted by our focus groups. Improvements needed include cycle lane widening and junction upgrades. Suitable parking will also reduce these concerns, so councils should delineate specific cargo bike parking spaces.

# Annex one

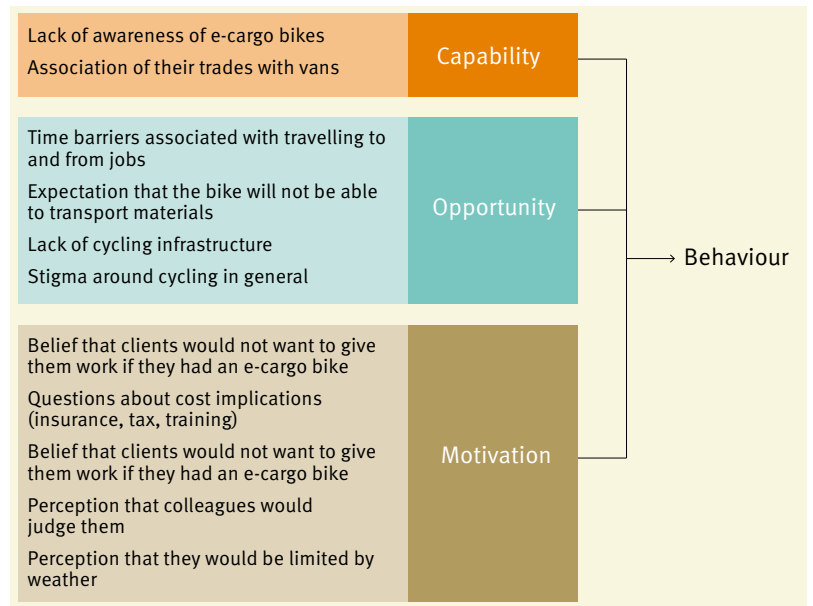
## Barriers to using e-cargo bikes: the COM-B behaviour change model

### About the model

The COM-B behaviour change model shows that a particular behaviour will occur only when a person has the ‘capability, opportunity and motivation’ to engage in the behaviour.<sup>33</sup>

### Our research

Objections raised by focus group participants, categorised under this model, indicate which areas need to be addressed to change attitudes and behaviour.



## Annex two

# The switch to electric vans: additional research insight

Without being prompted, the tradespeople and fleet managers we interviewed spoke about switching to electric vans. Both urban and rural tradespeople and fleet managers mentioned that they saw electric vans as their logical next step.

Larger businesses were more likely to have looked seriously into buying electric vans. This may partly be due to their environmental credentials in relation to net zero goals which are becoming an increasingly common consideration for businesses.

“If I could afford it, I’d get an electric van because I’m really trying to be green and sustainable; the diesel van I’m driving is expensive and is polluting the air.”

Tradesperson, rural

### The electric van market

Green Alliance has long advocated that electrification and modal shift should be complementary strategies for decarbonising the road transport system.<sup>34</sup> Switching diesel van journeys over to e-cargo bikes will not be right for all circumstances, so increasing the supply of electric vans should be done in parallel.

Commercial van fleets are increasingly moving towards cleaner alternatives. At the time of writing, Royal Mail, for example, has deployed 3,000 electric vans and has a further 2,000 on order.<sup>35</sup> OVO energy has pledged to hit a fully electric fleet by 2026.<sup>36</sup> Meanwhile, the EV100 campaign, where commercial operators pledge to reach 100 per cent



**“  
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track'.”**

electric fleet vehicles by 2030, has been signed by four of the largest five fleet operators in the UK.<sup>37</sup>

However, there are issues around the UK's attractiveness to electric vehicle manufacturers. In October 2022, it was announced that the van manufacturer Arrival will be moving its production from the UK to the US.<sup>38</sup> At the same time, UK gigafactory capacity, crucial to the UK's green industrial revolution, is struggling, as recent uncertainty around Britishvolt's financial future has shown.<sup>39</sup>

The electric van market is building from a lower baseline than the car market. In its 2022 progress report, the CCC highlighted that electric van sales were an area in which the UK was “significantly off track”.<sup>40</sup> There are far fewer models available for customers to choose from and there are user concerns around infrastructure and payloads.<sup>41</sup> Temporary issues, such as the worldwide chip shortage, have also resulted in delays. With over 4.6 million vans on UK roads, and only just over 31,000 of them electric, there is a need to scale up alternatives such as e-cargo bikes.<sup>42</sup>

### Emissions and a ZEV mandate

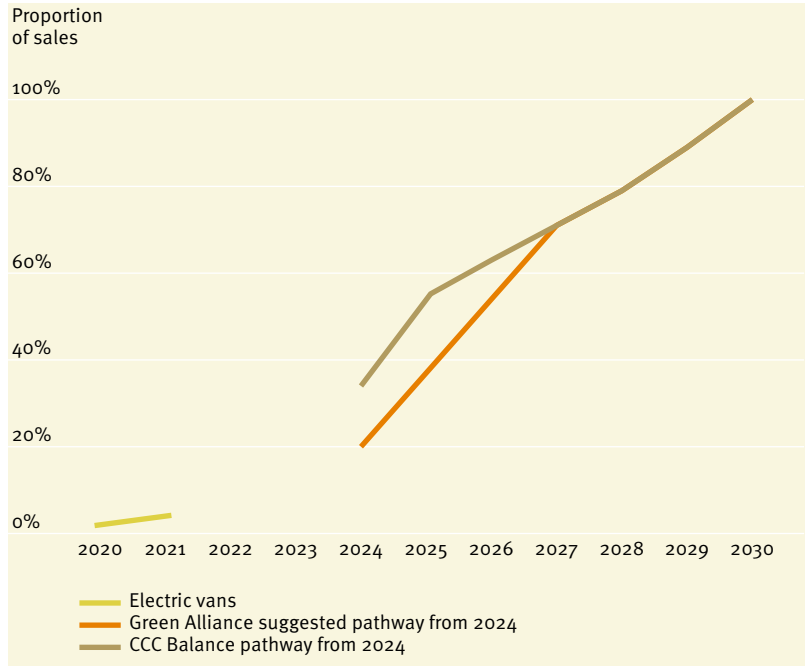
According to government figures from 2021, the average diesel van emits 241gCO<sub>2</sub>e per km.<sup>43</sup> By comparison, electric vans have zero tailpipe emissions. Even with the emissions associated with electricity generation factored in, electric vans only produce 55gCO<sub>2</sub>e per km, a four fold reduction in emissions.<sup>44</sup> This will continue to improve over time as decarbonisation of the UK's power sector progresses.

Despite the high energy requirements for battery production, electric vans are much lower polluters across their lifecycle than their fossil powered counterparts.<sup>45</sup> The evidence is also clear that, even though there is some particulate pollution associated with them, increasing the proportion of electric vans on UK roads will cut air pollution, particularly NOx emissions.<sup>46</sup>



## ZEV mandate targets should get electric van sales back on track

**“ZEV mandate targets should start at 20 per cent of new sales in 2024.”**



The government’s policy to stimulate investment is to introduce a zero emission vehicle (ZEV) mandate on manufacturers. This sets targets for electric vehicles as a share of overall sales each year. The policy is scheduled to come into force in January 2024 but, due to the state of the electric van market, initial targets are likely to set a low bar. The CCC’s Balanced Net Zero Pathway, on the other hand, shows a rate of new electric van sales in line with the sixth carbon budget.

It is clear that increasing the pace of uptake is crucial if the UK is to stick to its legal climate obligations. To meet them, it must simultaneously drive forward the electric van market while supporting other measures, such as the reduction of miles driven, through greater efficiency or shifting capacity onto cleaner forms of transport.

Due to the state of the electric van market, ZEV mandate targets will need to provide an initial adjustment period to allow manufacturers to meet new expectations. Therefore targets should start at 20 per cent of new sales in 2024 and rise rapidly to meet the CCC’s Balanced Pathway by 2027.

# Endnotes

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