Fleet Charging Guide 2022

Produced in partnership with Global Counsel

About this Report

The fleet industry is the lifeblood feeding the vital organs of the UK economy and society. It is the trucks taking parts to our factories and stock to our supermarkets; the vans delivering parcels to our SMEs and plumbers to our houses; the cars delivering key workers to their place of work and holidaymakers to their destinations.

These fleets – BVRLA members and their customers - are leading the transition to zero emission road transport. They operate in every town, city and region of the UK and many of them will convert all their vehicles to electric well ahead of the 2030 phase out target for banning the sale of new diesel or petrol cars and vans.

Access to fast, affordable, reliable, accessible and secure charging infrastructure is the biggest concern that organisations and drivers face when planning for their electric future. Fleets operate a wide range of vehicles in a wide variety of ways and there is no one-size fits all charging solution.

Getting the right infrastructure in the right place at the right time will require close collaboration between everyone in the electric vehicle ecosystem, including drivers, fleet operators, charge point operators (CPOs), distribution network operators (DNOs), local authorities (LAs) and national government.

To facilitate this process, the BVRLA's Fleet Charging Guide provides a high-level overview of how and where fleets charge and makes some recommendations on where the collaboration should focus.

Recommendations

Matching types of provision to emerging gaps in infrastructure

- The Government should conduct a regular review on whether private CPOs are filling gaps in public charging provision
- LAs and DNOs should work with the private sector to explore ways of mutualising the cost of grid connections
- The Government should provide national guidance for LAs and CPOs on how different vehicle 'dwell times' impact charge point requirements

Building trust in the reliability of infrastructure

- LAs should encourage the installation of more than one or two charge points in busy locations where reliability or redundancy is a key factor
- LAs and CPOs should set enforceable service level agreements
- LAs should require CPOs to provide dynamic data on charge point status and performance

Ensuring consistent ease of access

- Government funding should only be available for charge points that are secure and accessible for a variety of vehicle types
- The Government should provide LAs with guidance on specific requirements for charge point users with disabilities
- Government funding should incentivise charge points that support contactless or fuel card payments

Creating a future framework for decisions based on user need

- LAs should have an obligation to engage with fleets on future as well as present charge point provision
- LAs should work with DNOs, CPOs, fleets, regional transport boards and other stakeholders to promote regular engagement and sharing of data
- LAs should endeavour to establish a 'whole organisation' (planning, sustainable transport, economic development, parking etc) view of charging requirements across their region

About the BVRLA

Established in 1967, the British Vehicle Rental and Leasing Association (BVRLA) is the UK trade body for companies engaged in vehicle rental, leasing and fleet management. BVRLA members are responsible for a combined fleet of four million cars, vans and trucks on UK roads, accounting for one-in-ten cars, one-in-five vans and one-in-five trucks. The vehicle rental and leasing industry supports almost 500,000 jobs, adds £7.6 billion in tax revenues, and contributes £49 billion to the UK economy each year.

On behalf of its 1,000+ members, the BVRLA works with policymakers, public sector agencies, regulators, and other key stakeholders to ensure that road transport delivers environmental, social and economic benefits to everyone. BVRLA members are leading the charge to decarbonise road transport and are set to register 400,000 new battery electric cars and vans per year by 2025.

BVRLA membership provides customers with the reassurance that the company they are dealing with adheres to the highest standards of professionalism and fairness.

The association achieves this by maintaining industry standards and regulatory compliance via its mandatory Codes of Conduct, inspection and governance programme and government-approved Alternative Dispute Resolution service. To support this work, the BVRLA promotes best practice through its extensive range of training, events, and information-sharing activities.

BVRLA

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Methodology

Global Counsel was commissioned to research and write this guide on behalf of the BVRLA. It builds on the BVRLA's existing work to assess progress towards zero-emission fleets through its Road to Zero Report Card, but specifically addresses the pressing challenge of ensuring that electric vehicle (EV) charging infrastructure supports the requirements of fleets as we transition. This seeks to inform the national government's understanding of fleet needs and support local authorities (LAs) to install the most impactful charging infrastructure.

The guide is the product of extensive interviews with the BVRLA's members and their customers, through which we have sought to understand the way vehicles are currently used, their journey profiles, and their existing and future challenges with charging infrastructure. The interview process inevitably did not cover the full range of sectors and vehicle types. For example, the needs of HGVs were not explored in detail because their decarbonisation pathway was perceived to be more complex and further behind the other vehicle types discussed. Similarly, we did not directly cover all private and public fleets within the interviews, for example, blue light vehicles are not included. These gaps will continue to be developed subsequently through ongoing work by the BVRLA and others.

The interviews that are referred to within the guide were deliberately chosen to reflect a diversity of requirements across different fleets and to build a series of use cases to set out what might be required of LAs, private providers, and the national government to provide for the diversity of charging requirements within fleet. These use cases do not necessarily represent the detail of each individual company's requirements, but they do represent the range of requirements within the fleets and how this translates into charging requirements that must be addressed to enable the transition.

Glossary of Terms

CPO - Charge point operators

DNO - Distribution network operators

EV - Electric vehicle

HGV - Heavy goods vehicle

ICE - Internal combustion engine

LA - Local Authority

OZEV - Office for Zero Emissions Vehicles

OEM - Original equipment manufacturer - in this case, car and van makers

OSRC - On-Street Residential Chargepoint Scheme

SME - Small and medium-sized enterprises

Introduction

The next five years are critical in the transition of companies as they move from only using EVs where convenient, to EVs making up a majority of the vehicle fleet.

Meeting the policy ambition

The government's decision to legislate for the 2030 phase out of internal combustion engine (ICE) vehicles has created a clear deadline for individuals, companies, and auto manufacturers to transition to electric.

The BVRLA's Plug-in Pledge demonstrates the scale of commitment across fleet; by 2025, the vehicle rental, leasing and fleet industry will be registering 400,000 battery electric cars and vans each year. This fleet transition will not only facilitate the decarbonisation of transport, but also vastly impact customer choice, with many leased, rented, or car club journeys now being electric. It will also expand the number of affordable EVs in the used market as fleets cycle through vehicles at a more regular rate than other vehicle users.

The steps taken on charging infrastructure between now and 2025 will determine whether this transition kicks into gear or stalls along the way. So far, prompted by changes to Benefit-in-Kind tax rates, EV uptake has been led by company cars and the growth in salary sacrifice schemes where drivers can charge at home or work. Many commercial fleets have also started making the switch. As new technology continues to develop, this trend is set to continue at pace with fleets leading the way. It is essential that the provision of reliable infrastructure keeps in lockstep with increasing and changing EV usage.

Shared challenges

There will clearly need to be a seismic scale up in the delivery of infrastructure to support the transition, from just 29,000 current charge points to an infrastructure that supports the 11 million EVs expected on the road by 2030. This is not a task for policymakers alone - it requires extensive cooperation with private sector charge point operators (CPOs), energy companies, fleet operators, and the automotive companies themselves. The opportunities and challenges – economic, social, and environmental - are shared between these players, and public expectation weighs on them all.

The BVRLA is clear that fleets can play a key role in this by building an understanding of what charging is required across different vehicle use cases.

LAs already face a daunting challenge in engaging with all road users about their public charging needs. The BVRLA's 1000 members account for nearly four million vehicles on the road, and the diversity of different members enables a crucial window into the future needs and requirements of all road users.

Building this initial understanding of the different needs corresponding to different use cases will

enable LAs and national government to focus on the narrower set of actions around coordinating delivery between key stakeholders, identifying gaps that the private sector will not fill, and setting clear standards that ensure appropriate provision in charge points that are suitable for all users.

Creating a just transition

The key risk for policymakers in this process is that the available charging infrastructure means that only some vehicle users can transition, with others left behind. This is particularly pertinent to fleets, where charging infrastructure is not only supporting the decarbonisation of their vehicles but also implicitly enabling fleets to carry out essential services that businesses or consumers rely on.

In the absence of the right kind of charging provision, there is a clear risk to the services fleets provide to both businesses and households, their anticipated routes, and their journey times. There is also the risk that a perception grows that electrification is only catering towards a specific few; namely, those able to charge at home or who can afford (both in terms of time and cost) to change their mode of travel. The fallout from this will not be restricted just to fleets and drivers themselves, but also to public consent for the transition and net-zero agenda more broadly.

Infrastructure informed by need

This guide therefore focuses on how the delivery of charging infrastructure can be constructed in response to the genuine needs of fleets. It sets out how drivers expect to interact with different types of charging infrastructure as they transition to an EV.

Section one addresses how we build momentum as LAs increasingly take responsibility for planning and provision of charging infrastructure.

Section two explores how the profiles of different users can be used to identify areas of existing and future requirements, while section three outlines how these same profiles can show how to support the most challenging vehicles to transition.

The final section of the guide provides specific recommendations for how the local and national framework can best support the needs of the various users identified. These are organised under four broad principles: minimising gaps; building reliability; ensuring accessibility; and creating a future framework based on need. This reflects that provision will not be delivered through a single solution, but instead requires joined-up action that accounts for the full spectrum of needs, both now and in the future.

Section 1: Building Momentum

Charging infrastructure remains one of the most significant barriers to uptake of EVs across fleet. Although measures to address this are underway, with the public charging network more than tripling in size since 2018, the private sector is focusing on installing infrastructure with the best commercial cases and profitability. Building momentum across the full range of possible charging uses will be key to guaranteeing the transition.

The role of LAs

LAs have a critical role to play in the EV transition. The roll-out of the On-Street Residential Charging Scheme (OSRC) gave LAs the ability to start intervening in local EV infrastructure with nationwide funds allocated for the first time. The resulting installations have been an important starting point in addressing one of the most pressing barriers for EV take-up, by focusing on providing charging infrastructure for those without access to off-street parking (6.6 million households across the UK are in this position).

As 2030 solidifies as a key deadline, businesses are now looking to the next stage of transitioning their fleets and the rate of EV registrations will continue to grow. Given this context, it is vital that LAs and other charging infrastructure providers can adapt their approach to meet the demands of growing and diverse fleet needs. Without this, there is risk of a widening provision gap for some vehicle uses and types, in terms of access to the type of charging they need, the reliability of the charge points, and the design of this infrastructure to suit all vehicles.

LAs are well-positioned to play a supporting role in monitoring and addressing these provision gaps (either through the distribution of funds or through collaboration with the private sector) and ensuring that fleets are not left behind in the transition.

> **"People who have taken EVs to date have had access to home charging"**
> Fleet director, vehicle leasing company

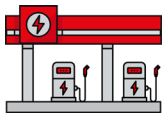
Emphasis on a broader set of charging types

To support this new role, we now need to move beyond a focus on overnight residential solutions and look at coordinating a roll-out that supports charging needs along the entire profile of driver journeys. A recent survey of EV users found that 90% of current EV drivers use public networks at least occasionally.

Greater LA involvement in planning and provision provides an important opportunity to consider this wider set of uses. For example, for vehicles that are in use all day and under time pressures due to the way their business is centred, there is rarely the time available for drivers to sit on a slow charge point for the length of time needed for a full charge. This particularly applies to fleets like delivery drivers, or car club rentals with short dwell times and rapid turnarounds between hires. However, almost all fleets spoken to cited time pressure as a particular concern when considering their charging needs.

Types of Charging

Below we have considered the broad **types of charging** that will need to be facilitated to meet the needs of different users:



Rapid Charging

This refers to charging using a 50kWh (or higher powered) charger. This would typically be used where a driver/vehicle has very limited downtime during their day, and either needs to reach a full charge quickly or top-up while en-route, e.g. whilst taking lunch or completing paperwork.

Home/work

This refers to charging that a driver/vehicle can typically do over a long period of time at their home or at their workplace, where there is allocated space (either a drive or carpark) that enables them to do this. This typically means they can charge at 7kWh.

Near-home

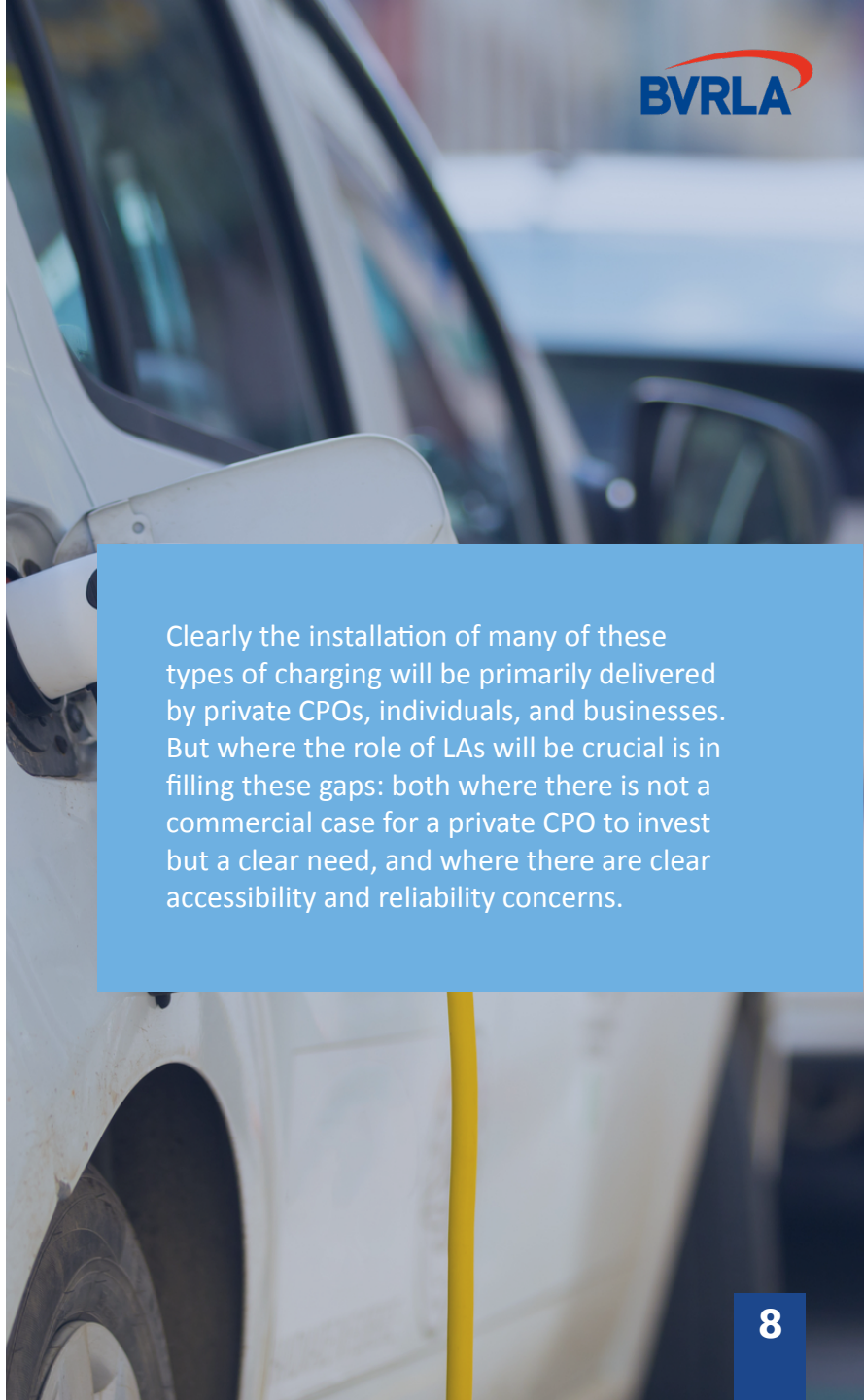
This refers to charging that can be accessed within a 5-10 minute walk from an individual's home and where a vehicle can be left securely for a long period, typically overnight. This means they can charge at 7kWh.

Destination

This refers to charging that would be done at the place where a driver/vehicle has traveled to and stops for a significant period, either overnight or for a full workday, for example at a customer's place of work, leisure venue or hotel/B&B if staying away from home. This means that 7kwh is typically sufficient.

Depot

This refers to charging that can be accessed by a driver/vehicle at their company depot, where the vehicle can park-up securely for long periods of time. The power of charging will differ depending on the operation, dwell time and how much power there is at the site. Depot also refers to rental branches where some members want to charge vehicles quickly to support utilisation and high turn around.



Clearly the installation of many of these types of charging will be primarily delivered by private CPOs, individuals, and businesses. But where the role of LAs will be crucial is in filling these gaps: both where there is not a commercial case for a private CPO to invest but a clear need, and where there are clear accessibility and reliability concerns.

Quality alongside quantity

The public and political pressure on a rapid roll-out of charging infrastructure has led to a focus on the number of charge points rather than their reliability or accessibility.

In practice, this means acknowledging that the most common use cases (personal car use), have tended to already be catered for, and focus is now needed on other vehicle requirements like adequate space for vans or disabled access needs that are not factored into the design of the majority of charge points.

> **"LAs now need to lead on improving accessibility and standardising quality of EV infrastructure"**
> Director, car club provider

Accessibility standards were a notable gap until recently, but work is now ongoing between OZEV and the British Standards Institute to support these needs.

There is already some momentum from LAs and national government on these types of questions. The consultation on consumer experience, the proposals put forth on easing payment, and ongoing work on disabled access to charge points are promising in their scope to address current concerns. But conversations with fleets suggest that these measures would benefit from a more detailed look at the different use cases if they are to achieve their intended effect.

These interventions by national government now need to develop into a coherent approach to accessibility and reliability that can be taken forward by LAs and CPOs, either through tenders or at the point of installation. Considering that up to 50% (1.35 million) of all drivers or passengers with a disability will be partially or wholly reliant on public charging when transitioned to electric vehicles, the risk of not considering this wider set of requirements is too great to be overlooked.

A joined-up approach

The devolution of managing the roll-out of EV infrastructure to LAs can allow for targeted and tailored approaches to local charging needs.

> **"Central and local government have roles to play in coordinating the charge point rollout at a high level."**
> Fleet manager, high street retailer

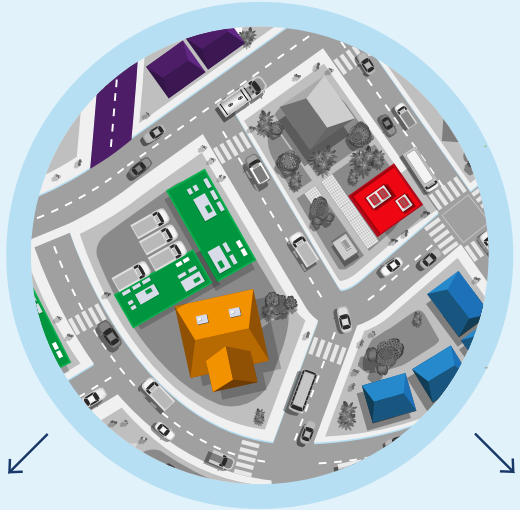
However, this will increasingly need to balance risks of not accounting for cross-LA needs, and the emergence of fragmented provision approaches.

The focus on local roll-out was the right approach for government in ensuring communities are provided for in the transition, but it now needs to account for journeys extending over or travelling through multiple LAs. This will enable us to avoid a "patchwork" effect, with different approaches and levels of provision across the country, impacting the potential of a country-wide transition to EVs.

> **"The pace of change in infrastructure is out of step with the changing needs [of electric vehicle users]"**
> Fleet manager, leasing company

In particular, estimating future demand based only on local EV registrations or the size of resident populations will not account for fleets that pass through LAs every day and are equally in need of provision. Extending the approach to recognise the needs of drivers making these journeys, and accounting for the wide diversity of use cases for EVs, will lead to an EV infrastructure that not only works better for fleets, but for all users of public charging infrastructure.

How Fleets Charge



Near Home

Delivery services (distributed locations)

- Multiple calling points, and different routes every day
- Driven throughout the working day
- Van taken home by driver at the end of a shift
- Driver may not have off-street parking

Engineer/work van (non-depot based)

- Significant range and journey variation day to day
- Shift work, may be on call or away from base
- Vehicles taken home by driver at the end of a shift
- Driver may not have off-street parking

Rapid

Private Hire/ride hailing

- Driven throughout the working day with limited downtime
- Vehicle taken home by driver at the end of a shift

Flexible vehicle (car club)

- Highly variable daily mileage
- Typically located in urban/city centres
- Limited downtime between rentals

At Depot

Engineer/work van (depot based)

- Significant range and journey variation day to day
- Shift work, may be on call or away from base
- Return to depot overnight

Delivery services (depot based)

- Multiple calling points, and different routes every day
- Driven throughout the working day with limited downtime
- Return to depot overnight

Destination

At Home/Work

Fexible vehicle (rental)

- Highly variable daily mileage
- Limited downtime and need to charge between rentals
- Customers need to charge at destinations

Company car

- Variable personal and business use
- May have long distance journeys
- Mainly return to home overnight

Disabled user

- Variable personal use
- Mainly return to home overnight
- Accessibility critical

KEY

Types Of Charging

- Rapid
- At Home/Work
- Near Home
- Destination
- At Depot

Type Preferences

- Preferred Type
- Other Types

Key

Charging Challenges

- Grid Capacity
- Accessibility
- Payment Interoperability
- Limited Downtime
- Secure Parking

Section 2: Understanding use cases

There is no singular way that EVs in fleets will be used. Grouping together similar requirements and patterns of usage into "use cases" will allow those involved in the delivery of infrastructure to identify clear needs from what otherwise may seem to be an overwhelming diversity of different firms.

The challenges faced by individual drivers from locations of charging points to accessibility requirements are mainly determined by the different profiles of journeys made, and it is these profiles or use cases that can be usefully considered in the development of future infrastructure.

The following use cases were selected based on extensive interviews with fleet users, but even within the use cases themselves a broad range of experience was captured. We therefore recommend that these are taken as a starting point to categorise different journey types, rather than an end in themselves. The use cases are intended to be supported by ongoing engagement between fleet and LAs to ensure there are not more specific needs contained within these use cases that are excluded from considerations.

The different charging types and the defining requirements of each use case are highlighted on the visual on page 10; these were principally the need for grid capacity, payment interoperability, accessibility, security, and minimal downtime.

Vehicle	Detail	Need
Delivery services (distributed locations) Vehicles used to deliver purchased goods to individual households and businesses. 	Daily distance around 100 miles a day. Multiple calling points, and different routes every day. Driven throughout the working day. Vans may return home with driver or be left by store location. Driver may not have off-street parking and store may not have charging facilities.	No guaranteed access to secure overnight charging. Limited time to charge throughout the day but would need accessible rapid charging facilities close to pick-up locations, which can vary from town centres to residential streets. They also need fuel card solutions because the business is typically paying the cost.
Engineer/work vehicles (non-depot based) Vehicles used to carry out a job typically tooled up for that job, e.g. infrastructure maintenance/ development vehicles, construction vehicles, utility providers. 	Typically, 60-150 miles a day; 12,000-25,000 miles annually. Significant range and journey variation day to day, particularly in rural areas. Shift work, may be on call or away from base. Traveling to (often multiple) sites that may not have reliable charging facilities. Vehicles taken home by driver at the end of a shift. Driver may not have off-street parking. Vehicles with specific technical requirements (ability to work from back of van; towing capacity etc).	Need greater rollout of secure charging, to support charging at destination but also for those who do not have an at-home charging option. Accessibility of current charging spaces is a major concern. They also need fuel card solutions because the business is typically paying the cost.

Vehicle	Detail	Need
Engineer/work vehicles (depot-based) Vehicles used to carry out a job typically tooled up for that job, e.g. infrastructure maintenance vehicles, construction vehicles. 	80-100 miles a day averaged across different vehicle uses. Significant range and journey variation day to day. Shift work, may be on call or away from base. Vehicles with specific technical requirements (ability to work from back of van; towing capacity etc). Return to depot overnight.	Needs energy infrastructure support to improve power capacity for charging point installations at depots. Needs the roll-out of rapid charging which can be used for top-up charging throughout the day (though this need may reduce as range improves).
Delivery services (depot-based) Vehicles used to deliver purchased goods to individual households and businesses. 	Daily distance around 100 miles a day. Multiple calling points, and different routes every day. Driven throughout the working day with limited downtime. Return to depot overnight.	Need to be able to charge overnight with investment at depot facilities, but this creates pressure on local energy capacity and can be costly where there is insufficient power at the site. Will still need easily accessible top up rapid charging throughout day, that can be paid for by a fuel card equivalent.
Company cars 	Variable personal and business use. May have long distance journeys. Vehicles either parked at workplace or visiting clients/customers and mainly return to home overnight where it has main charge. Predominantly off-street parking.	The majority of current adopters did so on the basis of ease of charging at home and work. Further adoption will require more near home charging for those who do not have a private driveway.

Vehicle	Detail	Need
Disabled user 	Variable personal use. Mainly return to home overnight. If there is not off-street parking, then reliant on on-street charging. Accessibility critical.	Major concerns around accessibility for disabled people, or those with reduced mobility. The charge point needs to be located at (or very close to) the user's home and where accessibility adjustments can be made. This includes consideration of weight of cables, surrounding space and the individual's confidence and comfort in using facilities. ↔
Flexible vehicle users (rental cars)  	Highly variable daily mileage. Pay per day or week unit; typically picked up from a branch and returned at the end of trip. Branch sometimes associated with a transport hub (e.g. railway station, ports). Journeys within rental period highly variable but could include business travel, visiting friends or holiday activities. Customers need to charge at destinations. Limited downtime and need to charge between rentals.	Rapid charging hubs to minimise downtime, but greater likelihood (than car clubs) of charging while rented, or back at physical rental location (contingent on appropriate power). Might be used by someone unfamiliar with EVs and EV infrastructure.

Vehicle	Detail	Need
Flexible vehicle users (car club) 	Highly variable daily mileage. Typically located in urban/city centres. Pay-per-minute, short distance journeys. Usage varies, but typically not used for more than 1-2 journeys over course of the rental period. Limited downtime between rentals.	Rapid charging hubs to minimise downtime, reliable locations in similar areas to where there is demand for the EVs, so vehicles do not need to be shuttled long distances.
Private hire and ride hailing vehicles 	80-160 miles a day. Driven throughout the working day with limited downtime. Vehicles taken home by driver at the end of a shift.	Rapid charging hubs to minimise downtime; reliable locations in similar areas to where there is demand for the EVs so vehicles do not need to be shuttled long distances.

The use cases above illustrate that, although no use cases are free from obstacles in switching to EVs, there are some fleets who have highly specific needs that will need to be addressed to ensure a smooth transition. Key to addressing this will be providing different types of charging across the different vehicle uses and ensuring that these reflect specific requirements (such as larger spaces, enhanced security etc).

Section 3: Expectations of the future

There is significant impetus among fleets to transition to EVs. The challenge is matching this appetite to charging provision.

The 2030 phase-out date for ICE vehicles has created a clear and present deadline for companies to changeover their fleets. The requirements described for each use case should not be taken as self-created barriers by reluctant fleets. All fleets indicated an appetite to change vehicles and a desire "to think differently", suggesting government targets, their own net-zero commitments, and customers were driving the transition.

This was just as true for smaller and medium-sized businesses as for larger ones. All fleets were clear that there are growing expectations from other businesses in their supply chain that they would seek to reduce their emissions through electrifying their fleet. As the use cases show, the diversity in charging requirements is not dictated by sector or company size, but by the types of journeys that companies felt they were able to transition. Fleets were typically pursuing a staged transition, prioritising those vehicles (and drivers) they felt would be easiest, most cost-effective, or more receptive to transition. In many cases, this prioritised those with access to home or workplace charging.

But getting charging right matters. When making the decision to transition, charging infrastructure emerged as the key concern for fleets, second only to the availability of the right kind of vehicles for the job.

Companies focussed on those vehicles in their fleet that they were not able to transition yet, but which represented large proportions of their fleet: this included rental vehicles in constant use, utility vans providing essential services and construction workers who rely on their vehicle to do their job.

Addressing gaps in provision

The clearest gaps identified by fleets were in the provision of rapid charging in locations other than motorways. Typically, where transition could or had been made, the driver had access to depot or home charging, or it related to a company car, where users may typically have greater flexibility on charging location and dwell time. Where fleets found it most difficult to envisage the transition was where they needed to minimise downtime – therefore needing rapid charging in a convenient location.

These concerns were strongest with the large numbers of commercial fleets where the vehicle is based at or returned to home, but the drivers do not have access to secure and private off-street charging. These drivers would be limited to the public network, and unless there is adequate and secure infrastructure close to home for overnight charging, will need a reliable and accessible rapid infrastructure that works not just for top-up charging, but to meet their full charging needs.

This need particularly applied to those fleets that were not frequently on motorways and might find themselves in rural locations providing vital services, but it also extended to supermarket delivery vehicles, who were on busy high streets or residential areas without rapid charging hubs.

Fleets also emphasised that the process between distribution network operators (DNOs), energy providers, Ofgem and LAs needed to be streamlined so that fleets could provide their own charging solutions. There was frequently a desire for businesses with an appropriate depot to install their own charging infrastructure, but the process for doing this emerged as a blocker. There was concern not just about reinforcement or extension costs (where the policy attention has been focussed) but over process, timelines and collaboration between the public and private sector.

This friction presents a particular problem for fleets, who are frequently transitioning several vehicles to electric, restructuring operational infrastructure to install points and incurring significant costs.

A utility provider with an emergency repair fleet
User profile: engineer/work vehicles (non-depot based)

Point in transition: 550 vehicles in fleet are currently electric and a further 350 on order but these are primarily company cars; they are now considering transitioning their repair vans.

Typical journey: Vehicles operating in 10-hour intervals normally travel from home to depot to get parts, then head out to single or multiple locations and return to the driver's home. Vehicles will then be on a rotational standby shift pattern, so out of hours use needs to be considered. However, with bigger issues like restoring power after a storm, a driver may lodge overnight or for a few nights.

Focus of requirements: Charging typically needs to be done at or near home, to limit travel time and charging within working hours but this needs to be supported by a rapid charging network to occasionally support them on the move or when lodging away from home.

Sticking points: Drivers are on tight timescale so need easy-to-use rapid chargers. But on-street rapid charging or even hubs are designed for cars rather than vans.

A supermarket with a grocery delivery service

User profile: delivery service (distributed locations)

Point in transition: Early-stage trials, <5% of total fleet currently electric, awaiting vehicles with frozen food storage capabilities.

Typical journey: Vehicles will be travelling from about 6am to 11pm but will reload at stores during the day. Vehicles will be typically restricted to one area to do drop-offs but can still travel >100 miles. Vehicles tend to be stored at/or near stores.

Focus of requirements: Charging likely to be easiest and most cost-effective using public charge points, but they need rapid charge points that are accessible near the supermarket locations to ensure that they are not making long deviations carrying perishable food.

Sticking points: The area where the supermarket is most likely to convert to EVs (e.g. London, urban areas with Clean Air Zones) typically have limited parking, especially for larger vans that need more secure parking and larger charging bays.

Equipment rental business with a fleet of vans

User profile: engineer/work vehicles (depot based)

Point in transition: Early-stage trials; roadmap to 2030 to transition almost half the commercial fleet to electric.

Typical journey: Vehicles rarely do the same journey twice; typically stopping around four times either at customer locations or making returns to depot.

Focus of requirements: Installing charging infrastructure at depots for overnight charging is ideal but doing this for full fleet has challenges for power capacity. Publicly available rapid charging top-ups during workday essential to meet customer requests.

Sticking points: Already encountering delays when putting in requests for charge point installation with DNOs. Assessments of drivers' ability to charge at home indicate there will be major reliance on public charging, which is currently unlikely to meet working day needs.

Large multi-national car club fleet

User profile: Flexible car users (short-term rental, car club)

Point in transition: EVs are a minor part of the overall fleet due to challenges with accessing on-street charging infrastructure.

Typical journey: Very short-term hires, often "by-the-hour"; typically travelling short distances to complete specific tasks. Although they are short in duration, they are typically round trips (e.g. to visit friends or family). Rapid turnaround time between hires.

Focus of requirements: Rapid charging network, which is easy to identify and use, with urban rapid hub charging roll-out rather than restriction to motorways.

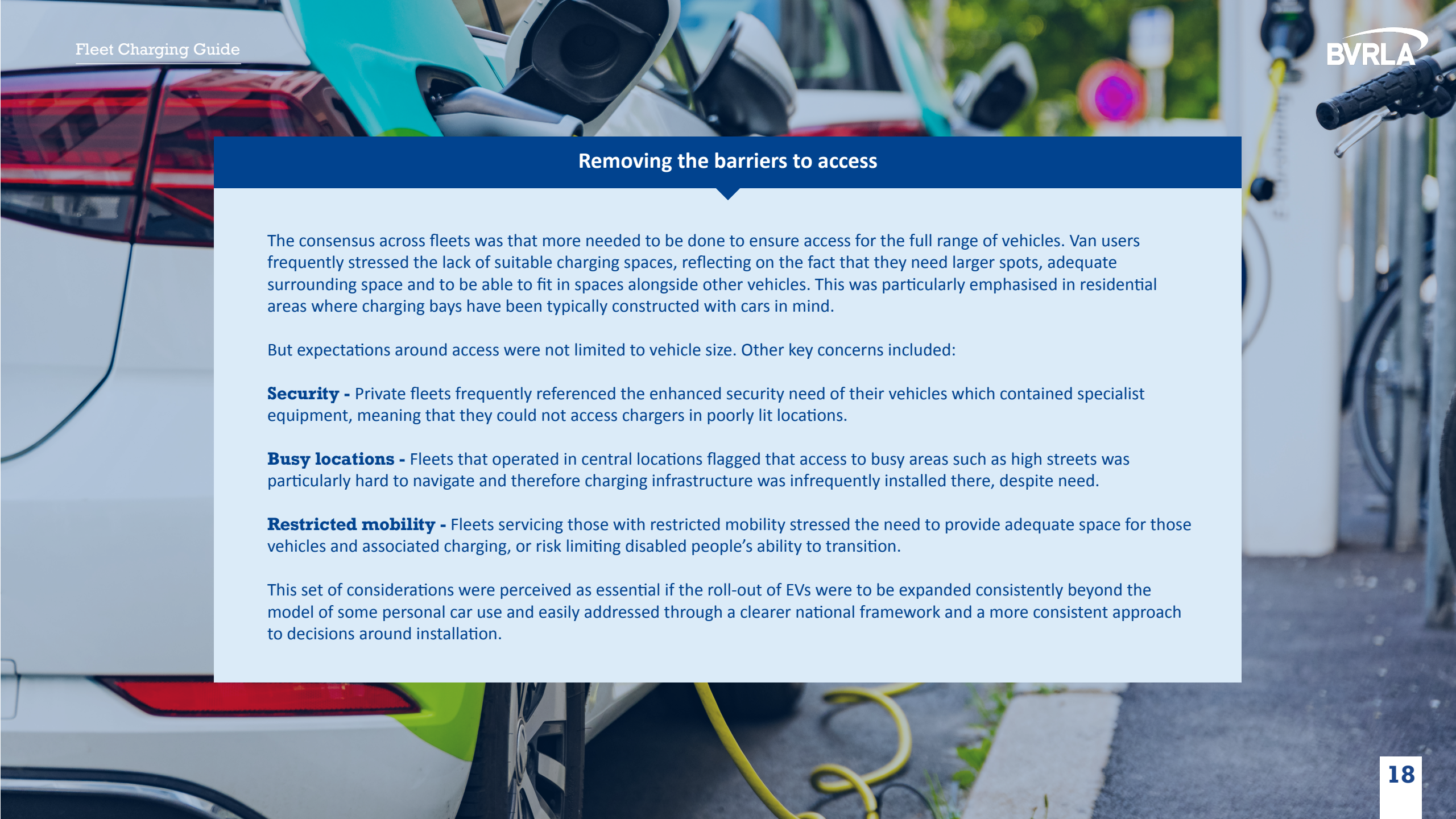
Sticking points: Drivers pay by the minute/hour, so are reluctant to pay for time the vehicle is unused and to go out of their way to find chargers. People are hiring for a quick, convenient solution to an often sudden need they have, so any perceived barrier to convenience is cited as a major concern. This concern is increased by lack of common familiarity with EVs.

Building reliability

The reliability of infrastructure - even where it is available – emerged as a particular concern, given the kind of services fleet and rental vehicles provided. Fleets suggested that information about the availability, condition, and kind of charger available was integral to them being able to operate smoothly. For example, engineer/work vehicle drivers would typically need to access charging during work hours (even where they were depot-based) and their ability to wait around was limited.

Where only one charge point is available, the inconvenience caused when it is either out of use or already occupied is much higher than if there were multiple charge points available at the same location.

This is particularly pertinent for rental vehicles, where there are short turnarounds between rental periods and where there is a need to reassure customers, many of whom are trying EVs for the first time, that they have sufficient range. In this instance, a focus on a hub model or a greater number of chargers in a location would increase confidence for customers or employees charging vehicles between rental periods that at least one charger will be available.



Removing the barriers to access

The consensus across fleets was that more needed to be done to ensure access for the full range of vehicles. Van users frequently stressed the lack of suitable charging spaces, reflecting on the fact that they need larger spots, adequate surrounding space and to be able to fit in spaces alongside other vehicles. This was particularly emphasised in residential areas where charging bays have been typically constructed with cars in mind.

But expectations around access were not limited to vehicle size. Other key concerns included:

Security - Private fleets frequently referenced the enhanced security need of their vehicles which contained specialist equipment, meaning that they could not access chargers in poorly lit locations.

Busy locations - Fleets that operated in central locations flagged that access to busy areas such as high streets was particularly hard to navigate and therefore charging infrastructure was infrequently installed there, despite need.

Restricted mobility - Fleets servicing those with restricted mobility stressed the need to provide adequate space for those vehicles and associated charging, or risk limiting disabled people's ability to transition.

This set of considerations were perceived as essential if the roll-out of EVs were to be expanded consistently beyond the model of some personal car use and easily addressed through a clearer national framework and a more consistent approach to decisions around installation.

Section 4: Recommendations

The recommendations below, grouped under four broad principles, reflect the fact that LAs have an important role to play in both providing and enabling the installation of charging points.

Taken together, these recommendations seek to ensure LAs play a key role in provision, remain well-informed about private sector use cases, and set an example of the highest standards of charging infrastructure provision. They also acknowledge that LAs are only part of the picture: a clear national framework needs to be set by the OZEV; work by the DNOs and Ofgem needs to continue; and OEMs need to stimulate wider fleet electrification through a greater choice of vehicles.

These recommendations therefore do not imply that LAs can solve every problem with provision or should be required to, but that they can work alongside the private sector within a clear framework and funding structure to deliver a charging infrastructure that better supports the transition of different fleets. This is clearly set out in existing work done by the Local Government Association (LGA) and Local Partnerships.

To further this collaborative approach, the BVRLA will be looking to LAs to signal their willingness to consider fleet needs as part of their charging infrastructure planning.

Matching types of provision to emerging gaps in infrastructure

The incoming requirements on installations in new houses and commercial renovations and the expansion of the scope in funding for on-street charging, all create the opportunity for the charging infrastructure network to serve a more diverse set of users. However, to support this, LAs, national government and other intermediaries (e.g. DNOs) need to consider use cases, which may not be well served by the assumptions implicit in current funding arrangements and structures that are focussed on domestic car use.

1. **The Government should conduct a regular review on whether private CPOs are filling gaps in public charging provision**

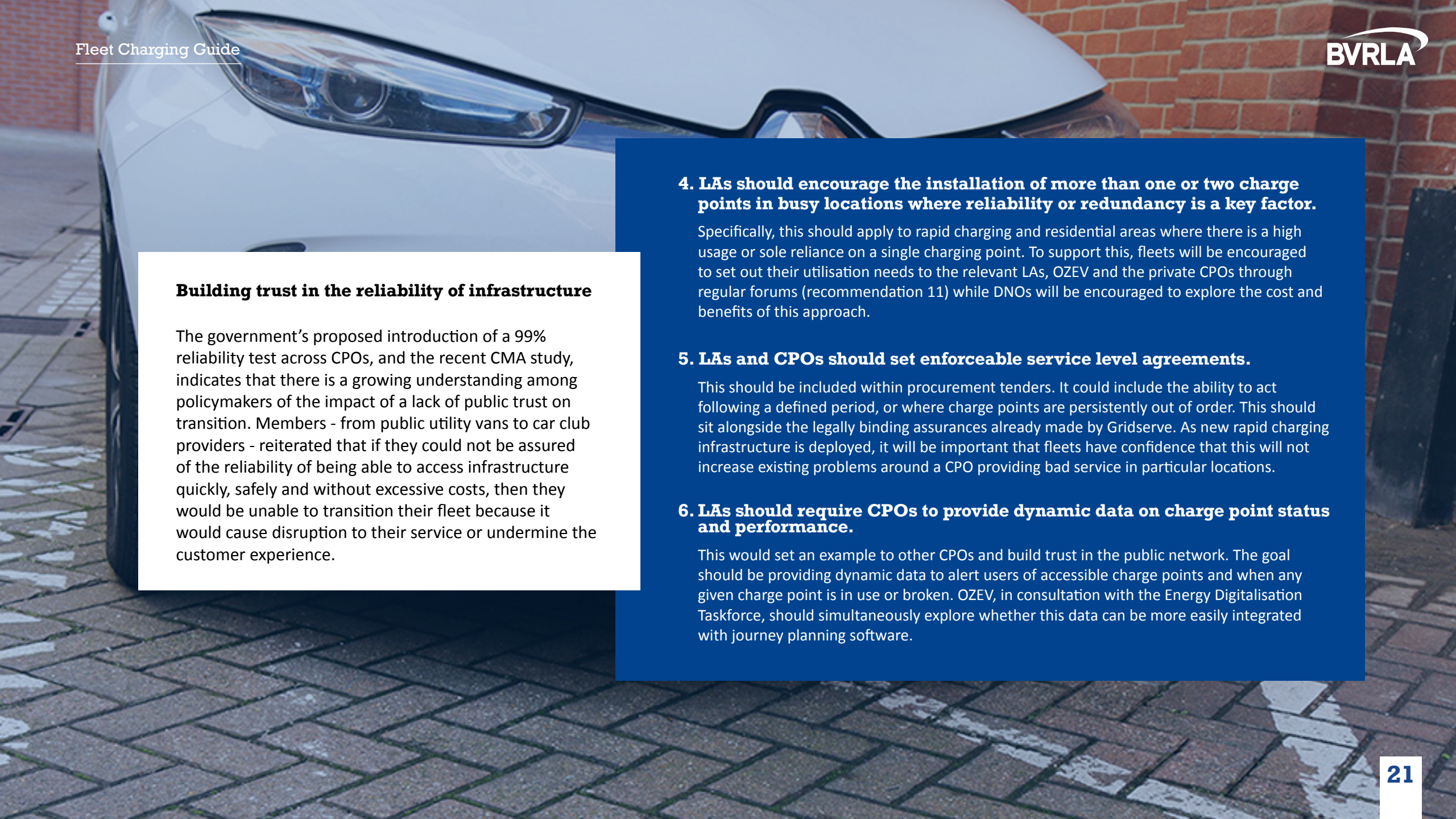
   To support this, OZEV should ask LAs to seek evidence of vehicle users not covered by the two main funding pots (the OSRC and the rapid charging fund) bi-annually, which could be supported or carried out by the forum referenced in recommendation 11 to reduce additional burden on LAs. The process would build both awareness of current gaps and an understanding of how well private CPOs are currently filling these gaps.

2. **LAs and DNOs should work with the private sector to explore ways of mutualising the cost of grid connections.**

   Alongside ongoing work by Ofgem to consider cost reductions, LAs and DNOs should seek to coordinate and bring together businesses looking to invest in infrastructure, so that reinforcement and extension costs set by the DNO are shared. To support this, the national funding framework should explicitly enable collaboration between LAs and the private sector to mutualise costs. LAs should also, where possible, serve as an intermediary between DNOs and fleets to help understand why power upgrades may be blocked or delayed, or significant costs incurred.

3. **The Government should provide national guidance for LAs and CPOs on how different vehicle 'dwell times' impact charge point requirements.**

   This should build on the framework set by the EV Charging Infrastructure Strategy and sit alongside existing national advice provided on procurement, funding eligibility, and installation. Given their part in the roll-out, the Energy Saving Trust should work with OZEV to develop this into further guidance for LAs and private CPOs. This guidance should cover what might be required to fit a specific use case, or number of uses, across a regional area.



Building trust in the reliability of infrastructure

The government's proposed introduction of a 99% reliability test across CPOs, and the recent CMA study, indicates that there is a growing understanding among policymakers of the impact of a lack of public trust on transition. Members - from public utility vans to car club providers - reiterated that if they could not be assured of the reliability of being able to access infrastructure quickly, safely and without excessive costs, then they would be unable to transition their fleet because it would cause disruption to their service or undermine the customer experience.

4. **LAs should encourage the installation of more than one or two charge points in busy locations where reliability or redundancy is a key factor.**

   Specifically, this should apply to rapid charging and residential areas where there is a high usage or sole reliance on a single charging point. To support this, fleets will be encouraged to set out their utilisation needs to the relevant LAs, OZEV and the private CPOs through regular forums (recommendation 11) while DNOs will be encouraged to explore the cost and benefits of this approach.

5. **LAs and CPOs should set enforceable service level agreements.**

   This should be included within procurement tenders. It could include the ability to act following a defined period, or where charge points are persistently out of order. This should sit alongside the legally binding assurances already made by Gridserve. As new rapid charging infrastructure is deployed, it will be important that fleets have confidence that this will not increase existing problems around a CPO providing bad service in particular locations.

6. **LAs should require CPOs to provide dynamic data on charge point status and performance.**

   This would set an example to other CPOs and build trust in the public network. The goal should be providing dynamic data to alert users of accessible charge points and when any given charge point is in use or broken. OZEV, in consultation with the Energy Digitalisation Taskforce, should simultaneously explore whether this data can be more easily integrated with journey planning software.

Ensuring consistent ease of access

Members agreed that restrictions on access were likely to be a barrier to transitioning their vehicles, with many arguing that the current number of differing payment methods and lack of appropriate facilities for larger vehicles posed a greater challenge for fleets than for personal vehicles. This particularly applies to fleets serving individuals with reduced mobility or disabilities, where LAs need to be particularly aware of their duties around equalities and their social equity responsibilities.

7. Government funding should only be available for charge points that are secure and accessible for a variety of vehicle types.

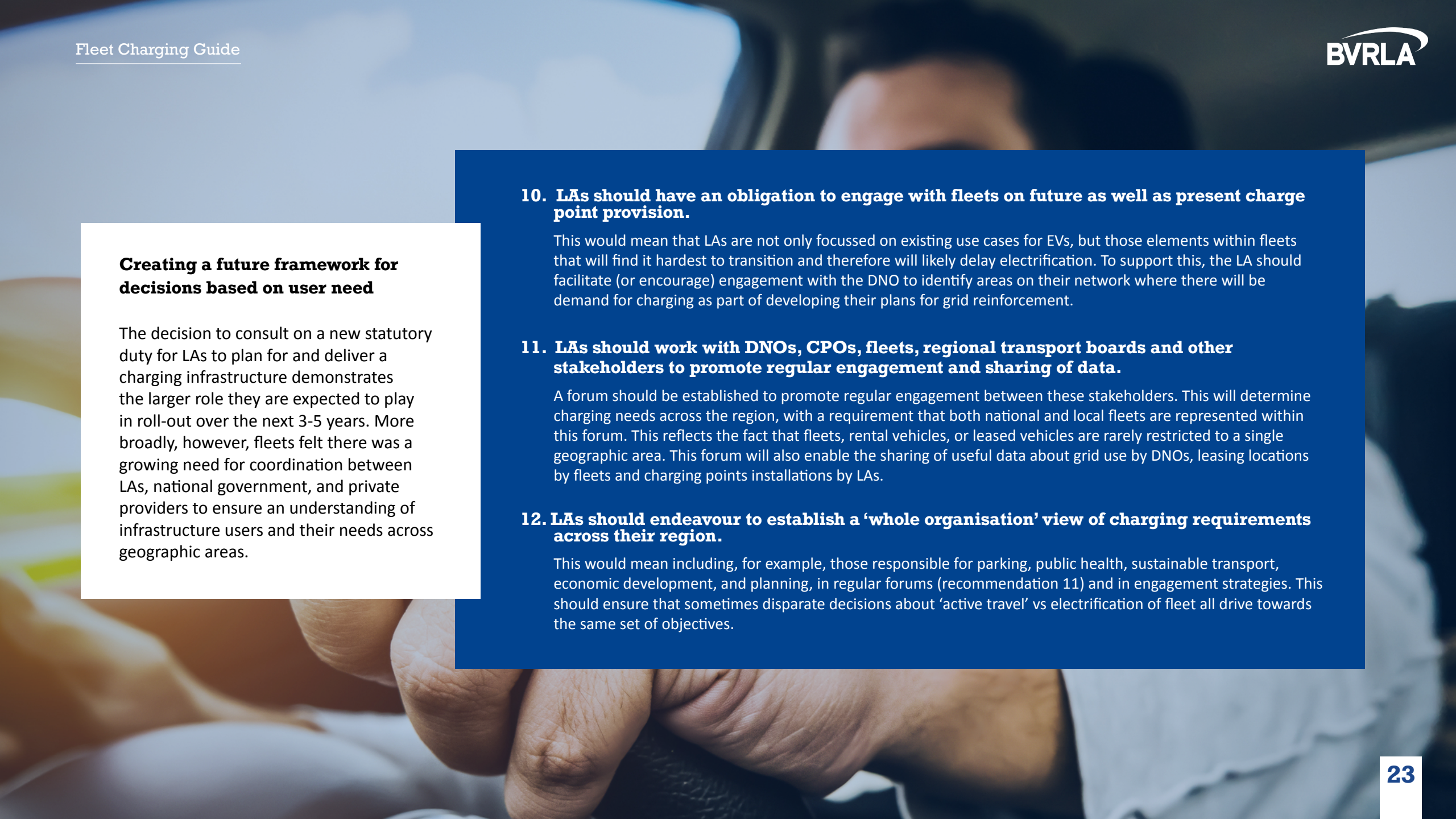
This should reflect the space requirements of vans at charge points and any additional security requirements relating to the cost of vans' equipment. This should be included in the current requirement in the funding criteria to demonstrate that locations will meet existing or future demand.

8. The Government should provide LAs with guidance on specific requirements for charge point users with disabilities.

This will support LAs to build this consideration into their charge point planning, including pre-installation. It will also empower LAs to audit CPOs to assess the extent to which standards or guidance on accessibility are being followed, and whether statutory powers are required in the future.

9. Government funding should incentivise charge points that support contactless or fuel card payments.

Assuming that the contactless payment issue is solved by the recent policy intervention, OZEV should include proof of roaming solutions in their evidence criteria for existing funding schemes. This reflects that for fleets, contactless payment is not the best solution, and that what they require is closer to an equivalent of the existing fuel card scheme.



Creating a future framework for decisions based on user need

The decision to consult on a new statutory duty for LAs to plan for and deliver a charging infrastructure demonstrates the larger role they are expected to play in roll-out over the next 3-5 years. More broadly, however, fleets felt there was a growing need for coordination between LAs, national government, and private providers to ensure an understanding of infrastructure users and their needs across geographic areas.

10. LAs should have an obligation to engage with fleets on future as well as present charge point provision.

This would mean that LAs are not only focussed on existing use cases for EVs, but those elements within fleets that will find it hardest to transition and therefore will likely delay electrification. To support this, the LA should facilitate (or encourage) engagement with the DNO to identify areas on their network where there will be demand for charging as part of developing their plans for grid reinforcement.

11. LAs should work with DNOs, CPOs, fleets, regional transport boards and other stakeholders to promote regular engagement and sharing of data.

A forum should be established to promote regular engagement between these stakeholders. This will determine charging needs across the region, with a requirement that both national and local fleets are represented within this forum. This reflects the fact that fleets, rental vehicles, or leased vehicles are rarely restricted to a single geographic area. This forum will also enable the sharing of useful data about grid use by DNOs, leasing locations by fleets and charging points installations by LAs.

12. LAs should endeavour to establish a 'whole organisation' view of charging requirements across their region.

This would mean including, for example, those responsible for parking, public health, sustainable transport, economic development, and planning, in regular forums (recommendation 11) and in engagement strategies. This should ensure that sometimes disparate decisions about 'active travel' vs electrification of fleet all drive towards the same set of objectives.

Conclusion

Rather than making overarching assumptions about the needs of drivers in the transition to EVs, this guide and its underlying research is intended to demonstrate the advantages of an approach to EV charging that focuses on use cases.

The BVRLA's intention is to continue work with OZEV to turn this work into clearer guidance for LAs and work with LAs directly to ensure fleet needs are considered in their charging infrastructure planning.

Alongside this, the BVRLA is looking forward to advising LAs on the best way to engage with representative national and regional fleets who can best convey the challenges of charging and the requirements explored in this guide.

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