

Motability Foundation response to the Public Accounts Committee's inquiry on public charge points for electric vehicles

6 January 2025

Summary

This written response by the Motability Foundation focuses on ensuring accessible electric vehicle (EV) charging infrastructure for disabled drivers, passengers and pedestrians. The key points we address in our evidence are:


The accessibility of EV charging for disabled people - disabled drivers face significant challenges in accessing EV charging infrastructure, affecting their independence and freedom to travel. Common charging infrastructure obstacles include insufficient space around vehicles, heavy and cumbersome charging cables, inaccessible payment systems, and a general lack of inclusive design in public chargepoints. These issues can also affect accessibility in the streetscape for passengers and pedestrians.

The introduction of a minimum standard for charging infrastructure - PAS 1899, developed by the British Standards Institution (BSI) and co-sponsored by the Motability Foundation and the UK Government, has been developed to address the charging accessibility issues faced by disabled people and sets minimum accessibility requirements for EV charging in the UK.

Whilst PAS 1899 has been positively received, compliance with the minimum requirements has been disappointing. This reflects the complexity of developing and implementing a technical standard at pace to meet the Government's strategy of providing sufficient chargepoints ahead of demand.

Encouraging adoption of minimum requirements – the Foundation continues to support the uptake of PAS 1899, to ensure it is being adopted and implemented as widely as possible. This includes our endorsement of the best PAS 1899 assessment schemes, to enable industry, disabled people and the wider public to be more aware of which chargepoints conform with PAS 1899.

Given the lack of incentives for chargepoint providers to implement PAS 1899, or be assessed for compliance, the Foundation calls for Government to consider legislation, which would mandate chargepoint providers to conform with the minimum



requirements. We would support this to be undertaken in a phased approach to enable industry to have sufficient time to adapt and adjust.

The need for action - without action to address the challenges and barriers to EV chargepoint accessibility, as highlighted in this evidence, significant numbers of disabled drivers risk being excluded from the transition to EVs. And this transition will only be successful if it is inclusive for all.

About Us


The Motability Foundation is a national charity set up with all party parliamentary support in 1977 and incorporated by Royal Charter. We fund, support, research and innovate so that all disabled people can make the journeys they choose.

There are 16 million disabled people in the UK, making up more than one fifth of the population. However, disabled people often struggle to make journeys due to a lack of access to transport and accessible transport options. We work to change this by:

- funding other charities and organisations who give disabled people everyday transport options, from community buses to wheelchairs;
- awarding grants to other charities and organisations who provide different types of transport, or work towards making transport accessible;
- carrying out ongoing research, in partnership with disabled people and key stakeholders in the industry, to inspire innovations that continue to champion accessible transport for all; and
- overseeing the Motability Scheme and providing grants to help people use it.

The Motability Scheme is currently used by over 800,000 customers and is the main way we provide access to transport for disabled people. The Scheme, which is delivered by Motability Operations, a separate company working under contract to the Motability Foundation, offers disabled people a new vehicle, Wheelchair Accessible Vehicle (WAV) or powered wheelchair through a good value, all-inclusive leasing package which includes insurance, breakdown cover and maintenance.

Focusing on automotive vehicles, the Motability Scheme has become a significant part of the UK's transition to electric vehicles (EVs) and an important partner supporting the Government to meet its Zero Emissions Vehicles (ZEV) mandate targets. Disabled people who choose to use the Scheme are paving the way for the UK's mass adoption of EVs and are some of the first people in the UK to adopt EVs, with over 80,000 customers leasing an EV today. In fact, the Scheme includes the largest EV fleet in the UK. They are at the forefront of facing the challenges of the transition to EV ownership and are experiencing first-hand the challenges highlighted in the National Audit Office's recent report.



As well as the Motability Scheme enabling access to affordable electric vehicles for disabled people, the Motability Foundation is driving progress to ensure the infrastructure supporting EVs is equally accessible. We are proud to co-sponsor, alongside the Government, the development of PAS 1899, which sets the benchmark for accessible public EV charging infrastructure. From the outset, we have taken a leading role in bringing together disabled people, chargepoint operators, industry stakeholders, and local and central Government to shape this critical standard. We continue to champion the adoption of PAS 1899 and will continue to do all we can within our remit to remove barriers to accessibility across the public EV charging network.

Accessibility and EV charging


We welcome the opportunity to contribute written evidence to the House of Commons Public Accounts Committee's inquiry into public chargepoints for electric vehicles.

The Motability Foundation wants to ensure that disabled people are not left behind in the transition to EVs. The rollout of an inaccessible public charging infrastructure in the UK will reduce independence, freedom and wellbeing. Many disabled people are reliant on car travel. For example, 67 percent of Scheme customers rely on their Motability vehicle as the only car in their household. And disabled people are far less likely to be able to rely on public transport than people without disabilities. Research conducted by the Foundation has identified a 'transport accessibility gap' for disabled people due to a significant disparity in transport patterns and frequencies compared to non-disabled people.¹

A key reason for this gap is because current transport provision (in both public and private modes) does not adequately cater for the needs of disabled people. For many disabled people, car travel, including the ability to independently refuel and recharge, is an essential part of daily life. Travelling by car is the most popular main mode of transport for disabled people. According to the National Travel Survey, the majority of trips taken by disabled people are by car or van (62 percent).² Other transport modes, apart from walking, are much less popular, with bus (6 percent) and taxi/minicab travel (2 percent) ranked the next highest. Our research indicates that disabled people avoid public transport due to accessibility issues.

¹ Motability (2022), The Transport Accessibility Gap. Available at: https://www.motabilityfoundation.org.uk/media/iwaidhvk/motability_transport-accessibility-gap-report_march-2022_final.pdf

² NatCen (2019), Motability: disability and transport needs - Secondary analysis. Available at: https://www.motabilityfoundation.org.uk/media/mqanwysg/secondary_analysis_of_the_national_travel_survey_nts_2018_natcen.pdf



One of our key priorities is to work with industry, Government and other charities to amplify the voices of disabled people in the transport system and create innovative solutions to the chargepoint accessibility issues faced by disabled people. But making EV chargepoints accessible does not just benefit disabled people, it can also benefit everyone. For example, older people and those travelling with young children can also struggle with charging their vehicles because of heavy cabling and/or the limitations of space around a vehicle. The Foundation believes that every chargepoint should be accessible by 2030 so that the UK's transition to Net Zero emissions is fully inclusive.

With as many as one in four people in the UK living with a disability, our research estimates there will be 2.7 million disabled drivers in the UK in 2035. Of these 2.7 million, it is estimated up to 1.35 million, or 50 percent, will be at least wholly or partially reliant on public charging infrastructure, meaning they will need to charge their vehicle away from home.³ This brings financial implications for disabled people.

In general, disabled people and their families face additional costs to maintain the same quality of life as non-disabled people. In terms of household costs, Scope's latest Disability Price Tag data, indicates that disabled households need on average an additional £1,010 to maintain the same living standards as non-disabled households.⁴ A household with a disabled member is more likely to be low income compared to a non-disabled household.⁵ Whilst the median household disposable income is £34,500, more than half of Scheme customers live on an income of less than £30,000 per annum.⁶


Turning to vehicle running costs, we know at least 1.35 million disabled people will rely on the public charging network and will therefore need to pay 20 percent VAT to charge their vehicles, compared with the 5 percent VAT for home charging. Disabled people are less likely to own their own home and are more likely to be renting (through social housing, for instance). Off-street parking availability is typically more

³ Ricardo (2020), Electric Vehicle charging infrastructure for people living with disabilities: Report for Motability (the charity). Available at: https://www.motabilityfoundation.org.uk/media/ngmmyu0/electric_vehicle_charging_infrastructure_for_people_living_with_disabilities_ricardo_energy_and_environment.pdf

⁴ Scope (2024), Disability Price Tag 2024: Living with the extra cost of disability. Available at: <https://www.scope.org.uk/campaigns/disability-price-tag>

⁵ DWP (2024), Households Below Average Income: an analysis of the UK income distribution: FYE 1995 to FYE 2023. Available at: https://www.gov.uk/government/statistics/households-below-average-income-for-financial-years-ending-1995-to-2023/households-below-average-income-an-analysis-of-the-uk-income-distribution-fye-1995-to-fye-2023?utm_source=chatgpt.com

⁶ Source: Motability Operations. And ONS (2024), Average household income, UK: financial year ending 2023. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/householddisposableincomeandinequality/financialyearending2023>



limited in this arrangement, meaning that having a domestic, residential chargepoint is less likely.⁷

As an illustration of this, Scheme customers can have a home chargepoint installation included as part of their lease if they have access to off-street parking. But almost half of Scheme customers (circa 400,000) cannot have a home chargepoint installed and so they are completely dependent on the public charging network. To make it easier for customers, Motability Operations introduced Motability Go Charge which provides access to over 50,000 chargepoints from over 20 operators in one mobile app. Nonetheless, disabled users are more likely to be financially impacted by the costs for on-street charging. We note there have been significant calls from the manufacturing sector to cut VAT on public EV charging to help make owning an EV fairer and more attractive.

Yet, the National Audit Office's recent report (December 2024), which the Foundation contributed evidence to, states that "rollout of public chargepoints to date has not met the needs of drivers with disabilities". What is more, "there is a risk that their needs will remain unaddressed as chargepoint numbers increase." Research conducted by Motability Operations, the company which delivers the Motability Scheme, indicates that inadequate chargepoint infrastructure could detrimentally affect the transition to EVs for disabled people.

For instance, a survey of 1,129 Scheme customers in May 2024 found that a quarter (26 percent) stated that a better public charging network would be needed before they could commit to leasing an EV. Furthermore, in a survey conducted in October 2024, of 1,584 Scheme customers coming to the end of their lease (i.e. having four months remaining before renewal), 60 percent said they would not choose an EV when renewing. There are a number of infrastructure-related barriers which we illustrate below.

Barriers to EV charging faced by disabled people

The Foundation has conducted and commissioned extensive research to understand the barriers disabled people face when using EV chargepoints. These include built environment issues such as kerb height, particularly the lack of dropped kerbs around chargepoints. General unsuitable parking arrangements also cause a problem for disabled people. When charging their vehicles, there are difficulties around the height, weight and manoeuvrability of charging cables and the force

⁷ Ricardo (2020), Electric Vehicle charging infrastructure for people living with disabilities: Report for Motability (the charity). Available at: https://www.motabilityfoundation.org.uk/media/ngmmyu0/electric_vehicle_charging_infrastructure_for_people_living_with_disabilities_ricardo_energy_and_environment.pdf

required to attach the connector to the vehicle. The poor visibility of information screens and instructions are also inhibitors.⁸

Our most recent internal research was conducted in July 2024.⁹ Disabled people, who had experience using public chargepoints, took part in an online survey about EV charging. Whilst the sample was relatively small (N=150), its findings continue to reflect barriers raised by disabled drivers. The top three issues for respondents were: space around the vehicle; movement and plugging in of charging cables; and the payment process.

Space around the vehicle

60% of all EV users said that they experienced challenges related to space around the vehicle. For wheelchair users this was a particular issue. One said, “Most EV charging parking spots are not disabled bays, so [they are] not wide enough to use my wheelchair”.

Another issue was not having enough space to fully open a car door, which can limit or prevent disabled people accessing their vehicles: “There is virtually no space between bays so accessing and getting out of car is very difficult if another vehicle is parked”.



Movement and plugging in of charging cables

⁸ RiDC (2020), Going Electric? Research report into the accessibility of plug-in electric vehicles. Available at:

https://www.ridc.org.uk/sites/default/files/uploads/Research%20Reports/ElectricCars/RiDC_ElectricCars_Report.pdf

⁹ Motability Foundation (2024), Accessible EV Charging: Updated Evidence Review [Unpublished].

38% of all EV users stated they had experienced challenges related to the movement and plugging in of charging cables. This included the weight of cables presenting physical challenges, “The cables are very heavy, and they hurt my joints. Lifting it out the car is too difficult.” Conversely, cable lengths can also be too short.



Payment process

29% of all EV users had experienced challenges related to the payment process. Users mentioned the need for multiple apps to make chargepoint payments. Respondents reported that different apps could be needed in different locations, in different conditions (e.g. adverse weather), including when there was inadequate phone signal. Functionality and paying through apps were also raised: “So infuriating, [it] should be as easy as putting petrol in the car. No need for endless apps and setting up an account etc. You should just be able to scan your debit card and charge.”





PAS 1899

To address the chargepoint issues faced by disabled users of EVs, in partnership with the UK Government's Office for Zero Emission Vehicles (OZEV), we co-sponsored the rapid development of the PAS 1899 Accessible Public Charging Standard (PAS 1899) by the British Standards Institution (BSI).

To do this, BSI was commissioned to develop a national accessible charging standard for EV chargepoints. Taking 12 months, the development process included a steering group with a wide range of industry (including industry bodies, manufacturers and Charge Point Operators) and disability (including Disabled People's Organisations) representation. In fact, disabled people were involved at every stage of the standard's creation. The general public also had opportunities to contribute via open consultation.


Published in October 2022, PAS 1899 provides the charging infrastructure industry with a clear specification of the minimum accessibility requirements for chargepoints of different speeds and in different environments. It has been designed to apply to all chargepoints and provides a specification of chargepoint features including: kerb height, bollard spacing, the weight of equipment, the height of connectors and the space around the chargepoint. PAS 1899 is owned by BSI but is free to access by stakeholders, such as Charge Point Operators (CPOs), due to the Foundation's and OZEV's sponsorship.

It is important to stress that PAS 1899 was fast-tracked to provide a minimum accessible standard for all types of chargepoint and was created in the context of an industry which needed urgent guidance. In contrast, a full British Standard takes double or triple the time to develop and would require all stakeholders to pay to access it.

This approach was in response to the then Government's overall strategy to develop the UK's charging infrastructure at pace, by providing sufficient chargepoints ahead of demand, as stated in its EV infrastructure paper, 'Taking charge: the electric vehicle infrastructure strategy' (2022). It was committed to actively encouraging the uptake of PAS 1899, as well as monitoring to assess whether further intervention was needed. The present Government has yet to publicly state its approach to expansion of EV charging infrastructure and its regulation.

Industry reaction to PAS 1899

Since PAS 1899 was launched there are indications that stakeholders are beginning to take a more proactive approach to accessibility. Despite the industry remaining



fragmented, consumers are beginning to have greater choice and CPOs are becoming more focused on the user experience of their chargepoints.

Whilst the reception from the industry has been positive, two years on since PAS 1899's launch, there are still no chargepoints in the UK which are fully PAS 1899 compliant. This highlights the lack of incentives to adopt what is a voluntary standard. Moreover, like many rapid standards developed to provide urgent guidance, PAS 1899 was co-designed through extensive collaboration with a broad spectrum of relevant stakeholders, including industry representatives, CPOs, disability and accessibility advocates, and policymakers. However, as is often the case with new standards, its implementation in practice over the past two years has revealed practical challenges and unforeseen barriers that need to be addressed to ensure its requirements can be fully met.

Challenges and barriers to adopting PAS 1899


Inability to meet all PAS 1899 minimum requirements

Based on industry feedback, we know that some minimum requirements of PAS 1899 (such as heights of payment terminals and screens, cable weights, the requirement for dropped kerbs and so on) are very difficult to meet for CPOs. One of the reasons is because they are dependent on supply chains which source and provide charging infrastructure components from all over the world. For example, according to ChargeUK, the representative body for installers and operators of chargepoints, most CPOs do not manufacture their own hardware and those that do have to procure components globally. There are similar issues for operating and payment solutions software.

The consequences are that some CPOs decide not to go ahead with seeking to be assessed for PAS 1899 from the outset, as they know they cannot meet minimum requirements based on the parts they are purchasing. There is an alignment challenge with regard to PAS 1899 and other charging infrastructure standards, whether from the European Union or further afield. We would recommend the adoption of a single charging standard to ensure that the transition to EV charging remains equitable for all users.

Misunderstanding and misinterpretation of PAS 1899 requirements

Aside from not being able to meet all minimum requirements, there are also issues with some CPOs and local authorities not understanding various aspects of PAS 1899 or misinterpreting it, such as treating it as the very highest level of accessibility rather than the minimum standard, or confusing requirements for blue badge bays next to chargepoints with standard-sized parking bays. Government may wish to



consider how misunderstanding around PAS 1899, and misinterpretation of it, could be reduced.

A lack of clarity on roles and responsibilities

CPOs have shared that whilst responsibility to comply with PAS 1899 often practically falls to them, there are various other stakeholders involved in the provision, installation and operation of chargepoints. For example, landlords control the site selection of chargepoints because CPOs typically install them on land owned by third parties. And local authorities are often the ones who procure chargepoints or tender for a CPO to install and operate them. There are also designers, manufacturers, installers and energy suppliers to consider. This can lead to confusion about which party is responsible for compliance juxtaposed with which party has the actual ability to comply.

Government should consider how a single stakeholder can be clearly designated to bear ultimate accountability for PAS 1899 compliance, whilst also delineating the specific responsibilities of other parties in the regulatory environment. The aim would be to maintain clear regulatory accountability whilst recognising the practical roles which landlords, local authorities, designers, manufacturers, installers, CPOs and energy suppliers play in establishing accessible charging infrastructure.

A lack of accessibility data

As more chargepoints are installed, it is crucial there is open, high-quality data on charger availability, operational status, pricing and accessibility. However, for this to become realised it is acknowledged that there needs to be widespread adoption of PAS 1899's minimum requirements as a starting point. As illustrated previously, the challenges in implementing the standard's minimum requirements has meant that there are no chargepoints in the UK which are PAS 1899 compliant. But without adoption of PAS 1899, appropriate and relevant data will not be available to disabled people to be able to make informed decisions about their charging options.

Showing disabled people where they can find accessible chargepoints is vital to their adoption of EVs. Once they can be made aware of which chargepoints meet PAS 1899, the next step is the provision of open, accessible, comprehensive chargepoint data which increases choice. For example, is the charging space suitable for a wheelchair accessible vehicle? Is the height of the information/operation screen suitable for someone using a wheelchair? The Government may wish to consider how the open data standard, the Open Charge Point Interface (OPCI), could improve this by requesting CPOs to provide certain kinds of accessibility information to consumers with accessibility needs.



The review of PAS 1899

To address the various issues raised and ease the path to widespread adoption, the Foundation and OZEV have jointly sponsored a review of PAS 1899 and its implementation over the past two years, with the aim of updating its minimum requirements. This is being taken forward via a technical working group convened by BSI.

The working group includes representation from disabled people's organisations and charities, UK Government, national transport bodies, the chargepoint infrastructure industry, local authorities and accessible design experts. On the basis of this work, PAS 1899 is anticipated to be re-published mid 2025.

So far, the review has identified key challenges which require updates:

- Support better understanding of PAS 1899.
- Resolve the challenges relating to chargepoint manufacturing standards.
- Resolve challenges regarding the issues associated with highly variable on-street environments.
- Ensure that landlords take an active role in supporting accessible chargepoints where they are not the chargepoint procurer.
- Resolve the issues around unavoidable cable weights of higher speed chargers.

Recommendations for these key challenges will be released in early 2025.


Encouraging adoption of PAS 1899

The Foundation continues to support the uptake of PAS 1899 to ensure it is being adopted and implemented as widely as possible, to make public EV charging accessible to all. A primary way to do this is through assessment scheme endorsement.

Motability Foundation endorsement of assessment schemes

The Foundation knows, from our engagement with industry, that CPOs and manufacturers are keen to have a way of checking if their chargepoints conform with PAS 1899. In response to this we are providing our endorsement to the assessment schemes which we determine to be the best in checking whether a chargepoint, site, or network complies with PAS 1899 minimum requirements.

Working with an assessment scheme allows procurers and CPOs to demonstrate their commitment to accessibility and ensure that disabled people can make more



informed choices about where to charge as we transition to EVs. And in the spirit of that, results from assessments will be made freely available online, so that disabled people can make informed decisions about where to charge their EVs.


The Foundation started with a pilot endorsement in Autumn 2023. Through a robust application process, BSI Assurance UK and AccessAble were appointed as the first endorsed assessment schemes for a period of one year, until October 2024. Now all PAS 1899 assessment schemes (including existing endorsement holders and new assessment schemes) have been offered the opportunity to apply for endorsement, up until the end of 2025. We are currently contracting with the next batch of successful applicants to be endorsed and they will be publicly announced early 2025. Chargepoint providers, landowners, local authorities and manufacturers will be able to contact these companies directly to arrange assessments.

Mandatory implementation of PAS 1899

There are no tangible incentives for CPOs to implement PAS 1899 or be assessed for it. Nor is there any penalty for non-compliance. British Standards are voluntary unless referred to in legislation. So, at present, chargepoint providers are under no legal obligation to conform with PAS 1899. Any decision on mandation for the standard would have to be taken by the UK Government. At the Motability Foundation we believe that it may well be in the interests of Government to encourage take up of PAS 1899 further, including mandation. At a minimum the Government should ensure that any public funding for charging infrastructure does not go to chargepoints that do not meet minimum accessibility requirements.

At present, the UK Government's position is for PAS 1899 to remain voluntary unless data indicates that uptake is extremely poor. However, it may take some time until such data is available. But charging infrastructure is now being delivered at pace. According to ChargeUK, the product design cycle for chargepoints can be anything between one and three years, with CPOs having to utilise existing stock before new hardware can be procured. Given the looming 2030 phase out date for the sale of new vehicles with pure, internal combustion engines, it is crucial that accessible charging infrastructure is available for disabled people. Otherwise, as reported by the National Audit Office, large portions of the charging infrastructure network could be inaccessible to disabled drivers.

Is an updated PAS 1899 (to be published mid 2025), accompanied by practical guidance, sufficient to greatly increase uptake in compliance? Or will legislation for chargepoint infrastructure specification be required too? The Foundation believes that legislation will help PAS 1899 address most of the issues raised earlier in this submission. These include clarifying who has accountability and responsibility amongst the various stakeholders in implementing accessible chargepoints.



Furthermore, it could help create more of a 'systems look' for the accessibility of chargepoints, considering points such as what percentage of charging bays should also be blue-badge sized, providing much-requested guidance and potentially improving full network accessibility.


We understand that industry bodies, like ChargeUK and the Renewable Energy Association, are both supportive of legislation, as long as it can be achieved at scale. Industry has fed back this would 'level the playing field' to ensure all chargepoint operators are prioritising the minimum requirements, rather than some undercutting others during bidding processes. The Foundation would support a phased approach towards mandation to achieve 20 percent of public chargepoints being PAS 1899 compliant by 2027, rising to 50 percent by 2030, and then 70 percent by 2035.

Local Electric Vehicle Infrastructure (LEVI) Fund

Government could also consider setting a requirement that applications for EV infrastructure funding conform to PAS 1899. Local authorities are already required to answer questions about their awareness of PAS 1899 and how they are incorporating it into their infrastructure plans when applying to the Local Electric Vehicle Infrastructure (LEVI) Fund. It could go further and set a requirement for PAS 1899 compliance to access the LEVI Fund and also the Rapid Charging Fund. In consideration of potential recommendations, which the Public Accounts Committee may wish to make to Government, requiring applicants to be PAS 1899 compliant would be an important step towards adoption of the standard. This would especially be the case if legislation on mandation was not forthcoming.

At the Motability Foundation, we are driven by a commitment to ensuring that disabled people are not left behind in the transition to EVs. For disabled individuals, accessible transport is not a luxury but a cornerstone of their independence, freedom, and well-being. Without action to address the challenges and barriers to EV chargepoint accessibility, significant numbers of disabled drivers risk being excluded from this pivotal shift in transportation. And the transition to EVs will only be successful if it works for disabled people.

This is not only a matter of fairness but of societal progress — our transition to a net zero future must be inclusive of all. The Foundation's investment and partnerships in this area reflect the strength of our resolve. We will continue to champion the voices of disabled people, innovate with purpose, and collaborate with government and industry to ensure that no one is left behind in building a truly accessible transport system for the future.



We have subject matter expertise, regarding EV charging infrastructure and accessibility for disabled people, and would be pleased to discuss our research and this response in more detail with members of the Committee.

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