

**energy
saving
trust**

Making Mobility Accessible

Richard Mallender
David Rosselli

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Agenda

- Introduction to accessibility and PAS 1899
- Background and guidance, for those new to the meetings
- Feedback received so far from Tier 1 LAs regarding accessibility
- Zero/ medium/ high-cost options for working towards PAS1899
- Considerations when writing your LEVI ITT/ Specification
- Discussion

This webinar is being recorded

Afterwards the slide deck will be circulated

Introduction

We need accessible charge points

Highlighting the need

Charging at public EVCPs should be accessible

Currently 1 in 5 people in the UK are disabled

By 2035 there will be

- 2.7 million disabled drivers in the UK
- up to half (1.4m) relying on public EVCPs

What do people want to see? *

Working Condition – People want to know before they arrive that the charge point is working

Physical Accessibility

- Size of Parking Bays
- Weight of cables
- Height of payment screen
- Step free access
- Dropped kerbs (where necessary)
- Accessible toilet availability
- Proximity to other facilities – walking / wheeling distance

(* Themes taken from PAS 1899)



What do people want to see?

Availability Status – Real time information on whether a charge point is in use or available

Type of Charger – is it Rapid? Fast? Standard?
Clear, concise, simple information

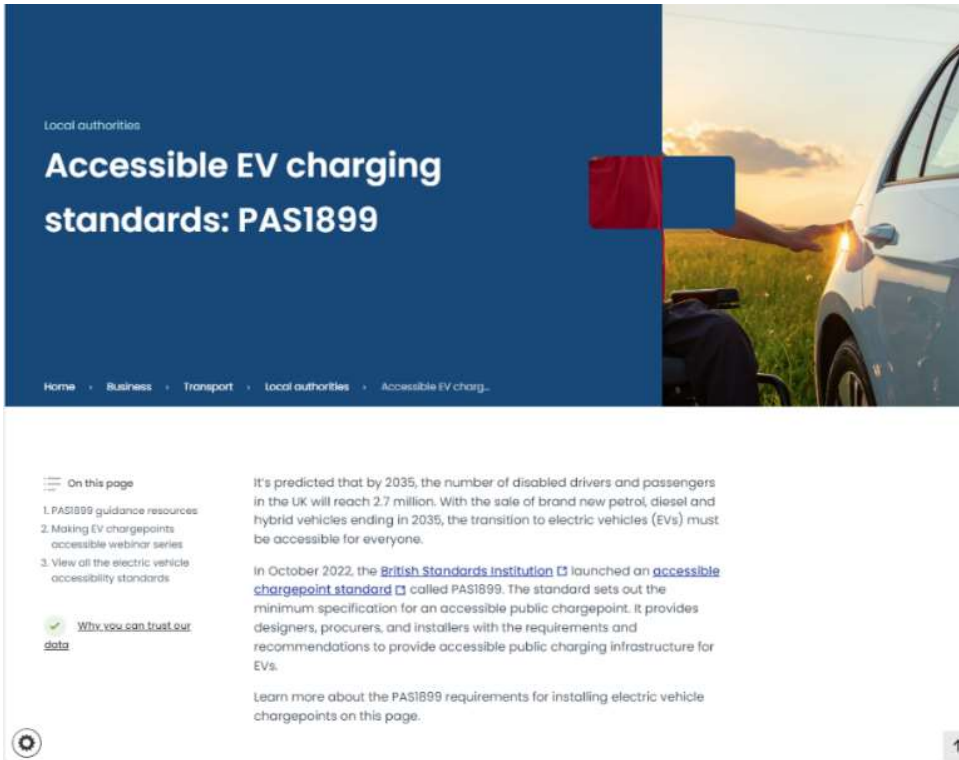
Location Details – Is it publicly available 24/7/365?
Where exactly is it?

Payment Options – How to pay? Can you use contactless? Is it on a roaming scheme? Do you need an app?

Pricing Information – Where is the price displayed? Is it visible before using the charge point?



Useful Pointers



Local authorities

Accessible EV charging standards: PAS1899

Home · Business · Transport · Local authorities · Accessible EV charging

On this page

1. PAS1899 guidance resources
2. Making EV chargepoints accessible webinar series
3. View all the electric vehicle accessibility standards

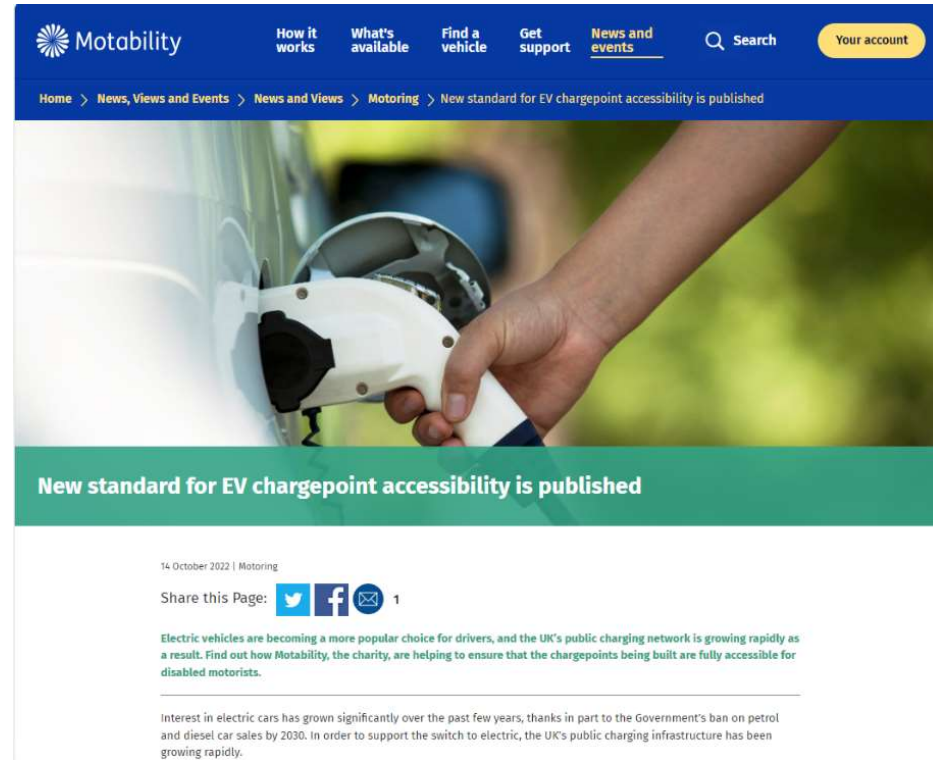
It's predicted that by 2035, the number of disabled drivers and passengers in the UK will reach 2.7 million. With the sale of brand new petrol, diesel and hybrid vehicles ending in 2035, the transition to electric vehicles (EVs) must be accessible for everyone.

In October 2022, the [British Standards Institution](#) launched an [accessible chargepoint standard](#) called PAS1899. The standard sets out the minimum specification for an accessible public chargepoint. It provides designers, procurers, and installers with the requirements and recommendations to provide accessible public charging infrastructure for EVs.

Learn more about the PAS1899 requirements for installing electric vehicle chargepoints on this page.

Why you can trust our data

<https://energysavingtrust.org.uk/service/electric-vehicle-accessibility-for-disabled-drivers-and-passengers/>



Motability

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New standard for EV chargepoint accessibility is published

14 October 2022 | Motoring

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Electric vehicles are becoming a more popular choice for drivers, and the UK's public charging network is growing rapidly as a result. Find out how Motability, the charity, are helping to ensure that the chargepoints being built are fully accessible for disabled motorists.

Interest in electric cars has grown significantly over the past few years, thanks in part to the Government's ban on petrol and diesel car sales by 2030. In order to support the switch to electric, the UK's public charging infrastructure has been growing rapidly.

<https://news.motability.co.uk/motoring/bsi-electric-charging-accessibility-standards/>

PAS 1899:2022 EV accessible charging overview

Charge point design

Provide for a range of needs of users, including disabled people, to achieve inclusive design

Charge point placement and positioning

Must be easily viewed, reached, and operated from a seated or fully standing position

Streetscape and public realm

The built environment around a public EVCP: accessible to all users

Digital platforms and information provision

Using EVCPs is often via smartphone apps – these must be designed for accessibility



<https://designability.org.uk/>

PAS 1899:2022 Minimum standard

PAS1899 is a non-mandatory standard, with two levels: (1) minimum, (2) best practice

Minimum Standard

Clause 5

Physical charge point design

- Height of components
- Cables
- Force to use
- Screen/ visual interface

(some charging units on the market do not comply with all parts of this element)

Clause 6

Charge point placement

- Position & orientation
- Smooth, stable ground
- No low-level obstacles
- Bollards/ impact barriers

(this element requires good joint working between the LA, CPO and residents)

Clause 7

Streetscape and public realm around the charge point

- Street furniture
- Level access/ dropped kerb
- Close to amenities/ venues
- Additional assistance

(this element requires good joint working between the LA, CPO and residents)

Clause 8

Digital platforms and information provision for charge points

- Remote digital platform
- Design, contents, composition
- Providing data & information

(some digital platforms & information provision on the market may not comply with all parts of this element)

PAS 1899:2022 Best practice

ANNEX A

Establishing an inclusive & safe environment around public charge points

- Lighting
- Security cameras
- Signage
- Positive feedbacks during charging

ANNEX B

Designated accessible parking bays (OFF-STREET)

Placement of charge points & surrounding environment

- Surface gradient
- Reach distance
- Space in front of EVCP/around EVs
- Wheel stops
- Distance to dropped kerb/level access
- Bays for larger EVs (WAVs, minibuses)

Establishing an inclusive environment

- Overhead weatherproofing
- Road markings
- Signage
- Distance to amenities/ venues

ANNEX C

Designated accessible parking bays (ON-STREET)

Placement of charge points & surrounding built environment

- Surface gradient
- Reach distance
- Space in front of EVCP/around EVs
- Distance to level access/ dropped kerb

Establishing an inclusive environment

- Road markings
- Distance to amenities/ venues

Feedback to date from Tier 1 LAs about accessibility

On-street PAS 1899 compliance is difficult

Councils and CPOs know that PAS 1899 for on-street minimum compliance is difficult, due to:

- Narrow pavements, narrow roads
- Cluttered pavements with a lot of existing street furniture
- Lampposts set at the pavement backline
- Heritage protection issues in historic areas
- Highways and drainage issues caused or made worse by buildouts
- Concerns about loss of parking bays in streets already fully parked up
- The statutory duty to protect the existing rights, uses and users of pavements and roads

Councils & CPOs know that PAS 1899 for on-street full compliance (minimum, plus Annexes A, C) will

- Add significant complexity
- Increase EVCP unit costs (by adding dropped kerbs, tactile paving, lights, CCTV, signage, build outs)
- Reduce the total number of EVCPs that can be built given a set amount of LEVI funding

What have LAs been asking?

Chargers and Digital platforms

- All councils expect some or all charger units and their digital platforms to be PAS 1899 compliant
- Councils **don't** know how specific charger models &/or digital platforms compare with clause 5 (physical charge point design) & clause 8 (digital platforms & information provision)
- Councils want CPOs to show how their chosen charging units & digital platforms will comply

Charging sites

- All councils are committed to PAS 1899 as the guiding principle
- Councils know that some on-street locations are unsuitable for PAS 1899 compliance (e.g. due to narrow pavements, sloping streets, narrow roads, existing highway uses)
- Councils will adopt a flexible approach (some fully compliant, more partially compliant)
- Councils are looking for nuanced bids from CPOs, explaining how CPOs will implement PAS 1899
- Where the CPO cannot achieve PAS 1899, councils will require a rationale

Approach observed in ITTs reviewed so far

Most LAs copied the text of paragraph *2.5 Accessibility* in the *LEVI Support Body Technical Schedules* and pasted it unchanged into their ITT

Therefore, LAs specified that the design, layout & implementation of chargepoint installations in

- **designated accessible bays shall**
 - **adhere** to the provisions set out in PAS 1899
- **standard bays shall**
 - **consider** the provisions in PAS 1899 and
 - **apply** them in so far as they are **reasonably practicable** by the supplier
- Some LAs state that where PAS1899 cannot be achieved, the CPO must provide an **evidenced rationale**
- Most LAs set no **targets, ratios, percentages** to quantify the no. of PAS-compliant EVI bays expected
- Most LAs set no **KPI** to track accessible EVI installations
- Most LAs do not mention requiring any engagement with **disability advocacy groups**

Zero, medium & high-cost options for working towards PAS 1899

NB What follows is advisory only,
for local authorities to consider

Implementing the ideas

The slides following present a wide range of possible actions/ approaches

The choices may differ depending on the specific street scene context at each EVI site

Some choices may incur additional costs

Choices marked **MS** are part of minimum compliance to PAS 1899

Choices marked **BP** are best practice, and are likely or certain to add costs

Choices marked **Extra** are not in PAS 1899, but could work well in some contexts

Therefore, Councils and CPOs will need to work in collaborative partnership to determine these factors.

Councils are encouraged to

- raise these factors in soft market testing with CPOs that might bid for LEVI-funded contracts
- consider carefully the feedback from CPOs
- write these factors into the Specification when procuring CPOs
- design how collaborative partnership working and governance will be organised

Zero extra cost PAS1899 compliance elements

Some have concerns that seeking to comply will always be difficult. But choosing and positioning carefully can sometimes cost nothing:

- MS** • **Orientation:** carefully select the orientation so that the EVCP is most accessible
- MS** • **Space in front & around:** carefully select the best portion of pavement that has the best space
- MS** • **Position on-street EVI** near to an existing dropped kerb
- MS** • **Position on-street EVI** near to an existing lighting scheme &/or CCTV camera
- MS** • **Local amenities/ venues:** carefully position EVI sites so they are easy to see and find

PAS 1899: **MS** = minimum standard; **BP** = best practice

Zero extra cost PAS1899 compliance elements

CPOs have a vital role, are already aware, and are seeking to provide the best solutions

- MS** • **Charger units:** CPOs should comply with clause 5 as far as is reasonably practicable
- MS** • **Digital platform & information:** CPOs should comply with Clause 8 as far as is reasonably practicable
- BP** • **Design in feedbacks** (lights, sounds, etc) showing what the charger is doing & when payment is done
- MS** • **Cables:** On-street low power EVCPs have no tethered cables (the driver will use their own cable)
- MS** • **Additional assistance:** CPOs are already required to offer 24/7 customer support

Councils could approach local businesses, shops, restaurants, etc

- Extra** • **Accessible charging bay:** some premises may welcome a public EVI bay on their forecourt/ carpark
- Extra** • **Additional assistance:** some premises may welcome being asked to help disabled drivers to charge

When a certain charging site is unsuitable for an accessible bay

- MS** • **Signposting:** display information directing people to another site nearby with an accessible bay

PAS 1899: **MS** = minimum standard; **BP** = best practice; **Extra** = not in PAS 1899

Medium extra cost PAS1899 compliance elements

- BP** • **Road markings/ hatching:** to delineate the charging bay and the charger
- BP** • **Security:** extend an existing CCTV system: add 1 extra camera, viewing the accessible bay
- BP** • **Lighting:** extend an existing lighting scheme: add 1 extra light, illuminating the accessible bay
- BP** • **Longer bays:** will allow WAV EVs the extra space needed for the driver to exit via the side/rear
- BP** • **Wider, longer bays:** will allow charging by EV vans, EV minibuses
- BP** • **Longer, parallel bays** will allow charging by EVs with trailers
- Extra** • **Decluttering:** during EVI installation make space by removing street furniture if no longer needed

These options will add cost and could impact the overall commercial offer from a CPO

There are trade-offs to bear in mind

- additional spending will enhance accessibility, but
- could reduce the overall scale of the total number of EVI sites that the CPO can deliver

That applies even more when considering high cost options to enhance accessibility

High extra cost PAS1899 compliance elements

- BP** • New dropped kerbs: to enable wheelchair users to access the charger
- Extra** • Extra dropped kerbs: to enable wheelchair users to cross any road junctions on their way home
- BP** • Tactile paving: to enable people to know where the charger is
- MS** • Cable management systems: if the cable weight is heavy, hard to position/ twist/ rotate/ turn
- BP** • New security & lighting systems: if there are no existing systems available that could be extended
- BP** • Weatherproof covering to protect people from rain etc.
- BP** • Extensive groundworks to make a sloping/ unstable surface flat and non-slip
- Extra** • Decluttering: during EVI installation create space by *relocating and reinstalling* street furniture
- BP** • Existing Blue Badge bays: retrofit EVI at or very near to such bays, which will already be spacious & flat
- BP** • Existing 'disabled' bays: retrofit EVI at or very near to such bays, which will already be spacious & flat
- BP** • Level surface, non-slip: give designated accessible bays in sloping/ gravel car park a flat tarmac surface

PAS 1899: **MS** = minimum standard; **BP** = best practice; **Extra** = not in PAS 1899

Considerations when writing your LEVI ITT/ Specification

NB What follows is advisory only,
for local authorities to consider

Involving disability advocacy groups

It is good practice to involve people with disabilities in service design, delivery and operation wherever the needs of disabled people are being considered. This could be achieved by engaging disability advocacy groups before, during and after installing EVI.

LAs and CPOs could consider

- Engaging with disability advocacy groups as part of design and development of the EVI network
- Developing meaningful long-term working relationship with those groups

Charger units and digital platforms/information

CPOs control how the design of their charging units align with PAS 1899 Clause 5 (physical characteristics)
(exception: lamppost EVI: orientation, position & min-max height of lamppost *door* may not comply with PAS 1899)

CPOs control how their digital platform and information provision align with Clause 8

LAs could consider requiring CPOs to self-assess and report on compliance, as follows:

- For each type of charging unit, digital platform and information provision, provide a self-assessment against clauses 5 and 8, identifying which elements will/ might/ won't be complied with
- For non-compliant elements, state whether they expect improvements might be feasible in future

This would not require CPOs to commit to independent evaluation against PAS 1899

This would enable CPOs to show how they believe their products & services compare to PAS 1899

This will work best in a context of mature conversations in a collaborative LA-CPO partnership

Car parks EVI

LAs do expect that car parks off-street will have some accessible EVI bays

Car park EVI will use various charger types & power ratings; PAS 1899 compliance may be affected by:

- **TETHERED CABLES:** the weight & ease of use will vary by model & power rating
- **CONNECTORS:** some are easier, and some harder, to connect to the socket
- **SCREENS:** some have minimum-maximum heights within PAS 1899 guidelines, but others do not

LAs could consider specifying:

- The expected number of designated accessible bays to be installed in each named car park (based on local demand data gathered previously)
- That CPOs explain in their bids:
 - How they will ensure each car park gets the expected number of designated accessible bays
 - How they will manage tethered cables, ease of connection, screen min-max heights
 - Which aspects of PAS 1899 will be achievable (yes/ perhaps/ no)
 - For elements likely to be non-compliant, state if improvements might be feasible in future

KPIs: standard bays

Consider including a KPI for CPOs to monitor standard EVCPs installed and to report, throughout the contract period, as follows:

Minimum compliance

- Track and report the percentage of standard bays installed that comply either partially or fully with
clauses 5 and 8 (charging unit; digital platform, information provision)
clauses 6 and 7 (EVCP placement; streetscape & public realm around the EVCP)
- Report any elements of PAS 1899 clauses 5–8 that have not been reasonably practicable

Going beyond minimum compliance

- Identify elements of supplementary best practice that successfully comply with PAS1899

KPIs: Designated accessible bays

Consider including a KPI for CPOs to monitor sites agreed and designated to be accessible parking bays and to report, throughout the contract period:

- The percentage of those designated accessible bays that comply either partially or fully with clauses 5 and 8 (charging unit; digital platform, information provision)
clauses 6 and 7 (EVCP placement; streetscape & public realm around the EVCP)
- Report any elements of PAS 1899 clauses 5–8 that have not been reasonably practicable
- Do the above for off-street scenarios and for on-street scenarios

Going beyond minimum compliance

- Identify those elements of supplementary best practice that successfully comply with PAS 1899

Further potential ways forwards

- Lotting to ensure accessibility is provided for
- When on-street EVI is just too difficult in some street scenes:
 - Off-street focus: investing in car park EVI
 - Gullies focus: encouraging householders to home-charge their EVs parked on-street
- Designated budget for future responsive provision
- Data-led approach to identify where disabled people live

Support is available from LGSP, to review the accessibility portion of your draft ITT & draft KPIs

Future changes to PAS 1899

There may be changes to PAS 1899:

- Work is ongoing behind the scenes
- Changes to PAS 1899 may happen during 2024 and 2025
- Further changes may happen during the 15-year contract period

However, most LAs have not referenced the possibility that the standards might evolve over time

Therefore, LAs are encouraged to

- Acknowledge in their ITT/ Specification that PAS 1899 may change during the contract period
- Ask CPOs for their overall approach to responding to potential future changes

Pitfalls to be careful of

Asking too much

- Requiring Equality Impact Assessments for every installation & every site, particularly if the EIA process is complex, intensive, quasi-legal, requires multiple signoffs, is imposed on CPOs
- Over-specifying eg full compliance for all sites, or 1 designated accessible bay in every site, without first clarifying if disabled EV drivers live close enough to use those accessible bays

Asking too little

- Under-specifying e.g. not mentioning accessibility sufficiently precisely
- Risk: ending up with very few designated accessible bays, or none at all

Risk of wasted investment

- Investing in costly on-street, low power designated accessible bays without first checking that disabled drivers live near enough to use them (i.e. and be able to return home while the EV charges)

Lack of localised clarity

- Inserting Technical Schedule paragraph 2.5 in the ITT/ Specification but not explaining how the LA sees it working in practice locally

Summary conclusions

Reminder: the previous slides are advisory only for LAs to consider

Be ambitious

- Scale Achieve the largest possible scale of new EVI charge points
- Accessibility Improve accessibility in the new EVI

Balance: carefully strike the right balance so that scale and accessibility are both achieved

Engage with disability advocacy groups

Continue to engage with CPOs about accessibility

Be flexible – PAS 1899 contains many detailed options, is still evolving, can be applied flexibly

Discussion

Future Webinars

Register via our website

Making EV chargepoints accessible – Energy Saving Trust

<https://energysavingtrust.org.uk/event/making-ev-chargepoints-accessible-local-authorities/>

Guest speakers

- Motability
- BSI
- AccessAble
- Disability Inclusion Groups



Making EV charge points accessible

14:00 Thursday 17 October

12:00 Thursday 14 November

MS Teams webinars

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Thank you

Richard.Mallender@est.org.uk

