



Why dig up perfectly good pavements?

APSE Presentation
27 March 2026

A Kerbo Charge installation in Drymen

Agenda

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1. Michael Goulden - navigating maintenance and liability (10 mins)

 2. Ben Whitaker - electrical safety and simultaneous contact (10 mins)

 3. Q&A (20 mins)





Michael Goulden
Co-Founder, Kerbo Charge

1. Navigating maintenance & liability

How will residents charge their cars?

Option 1: trail a cable



Problem:
Personal injury
claims

Option 2: public charging



Problem:
Inconvenience
& cost

£34.50 to
charge vs.
£4.62 at
home¹

1. Cost to charge a mid-sized 77 kWh car from 20 – 100% using a 56p/kWh 'slow /fast' charger vs. cost to charge using a 7.5p kWh overnight tariff (Octopus energy). Prices correct May 2024

Kerbo Charge is specifically designed to meet local authority requirements

Self-closing lid, only opens a small section at a time.

Memory-polymer lid snaps shut to eliminate trip hazard. Tested by BSI to EN 1433 (C250)



Flexes with bendy / uneven pavements for subtle installs in roughly one hour.

Pavement installation cut just 70mm wide, 40mm deep.



Loved by residents across the UK

Hartlepool



“ This Kerbo channel is a game changer for the EV owners living in their homes with no drive

Stewart Molloy, customer ”



[Read independent customer reviews here](#)

Richmond, London



Nottingham



Greater Manchester



Stirling

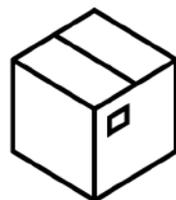
First step, choose your preferred operating model



1. Council owned and Supplier operated

e.g. Suffolk, West Berkshire, Oxfordshire, Bedford Borough Council

- Supplier onboards the residents, complete survey and Council sign off each install site.
- Supplier organises resident user agreement, installation and typically takes maintenance responsibility



2. Council owned and Council operated

e.g. Northumberland, Enfield Council, Milton Keynes

- Council buys the channels, Supplier trains up your install team.
- Council organises resident applications, site survey, taking payment, installation & maintenance.

Where does responsibility for installation maintenance sit?

Best practise approach:

1. Installer provides a two year comprehensive installation and labour warranty.
2. After two years the operator takes responsibility for any repairs.
3. Inspections added to BAU by LAs. Resident required to report any issues within 24 hours of discovering them.
4. If resident moves house an 'inert' fixed lid can be installed.

What are examples of different funding models?

- Kerbo Charge charges £4.99 a month for maintenance insurance from year 3
- Milton Keynes charges £50/year from year 4
- Other LAs subsume into BAU

How do we know when a resident moves?

- Some LA's use change of council tax details as a trigger
- Kerbo Charge uses cancellation of monthly payment as a trigger

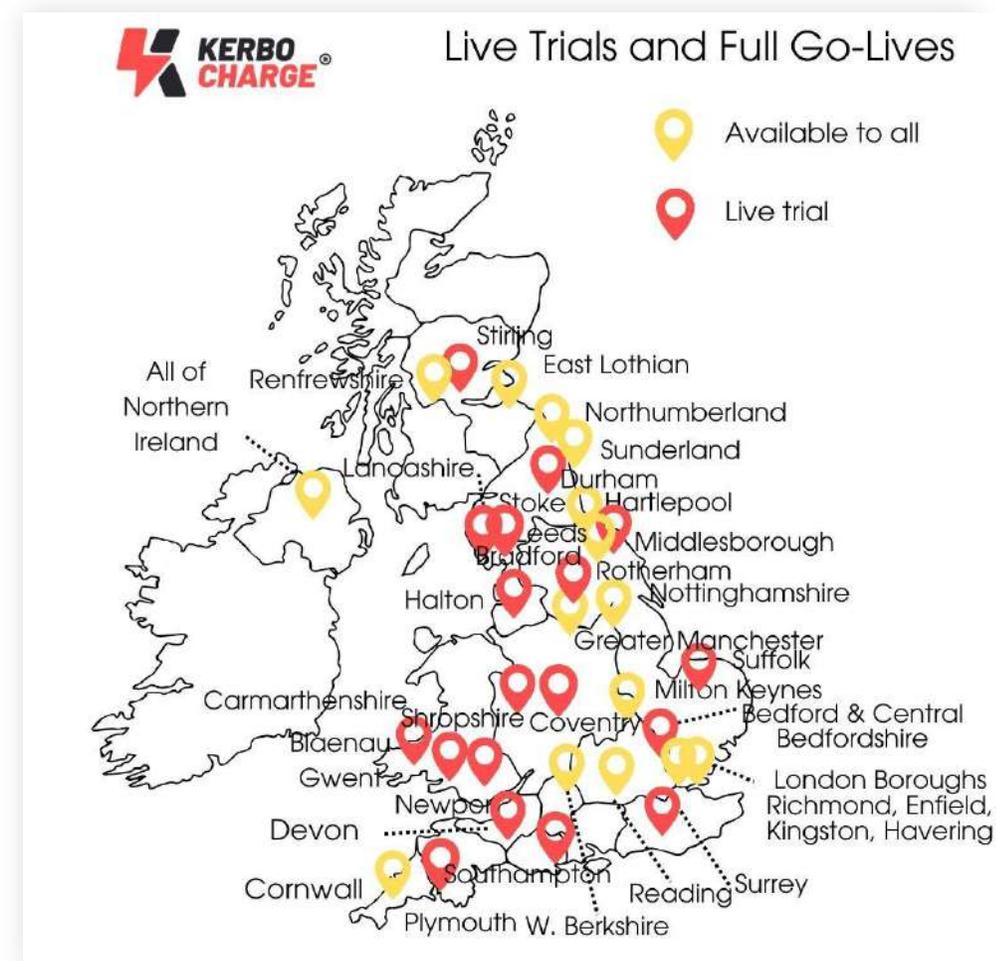
How to navigate accident liability

Risk area	Risk Owner
 Cable trip and electrical safety	 Resident
 Product failure	 Supplier
 Installation / maintenance failure	 Operator
 Vandalism	 Operator

Good news
 Most car insurance policies now include cover for charging cable trips



Reach out to other local authorities to learn about their approach!



2. Electrical safety & simultaneous contact

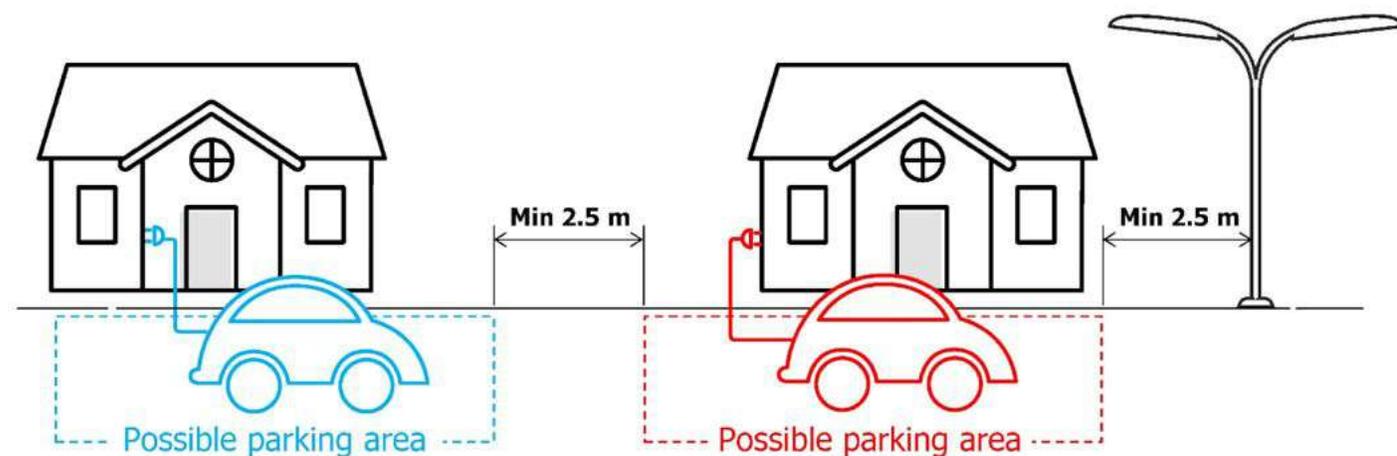


Ben Whitaker
Technical Director, Kerbo Charge



The Simultaneous Contact Problem

1. Chargers connect the car body to supply earth.
2. On-street charging takes the earth into the public realm.
3. **Although very rare:** Different earth voltages may develop from ground conditions or faults at each earth spike.



BS7671 requires all conducting bodies **that are on different earths** are kept over 2.5m apart

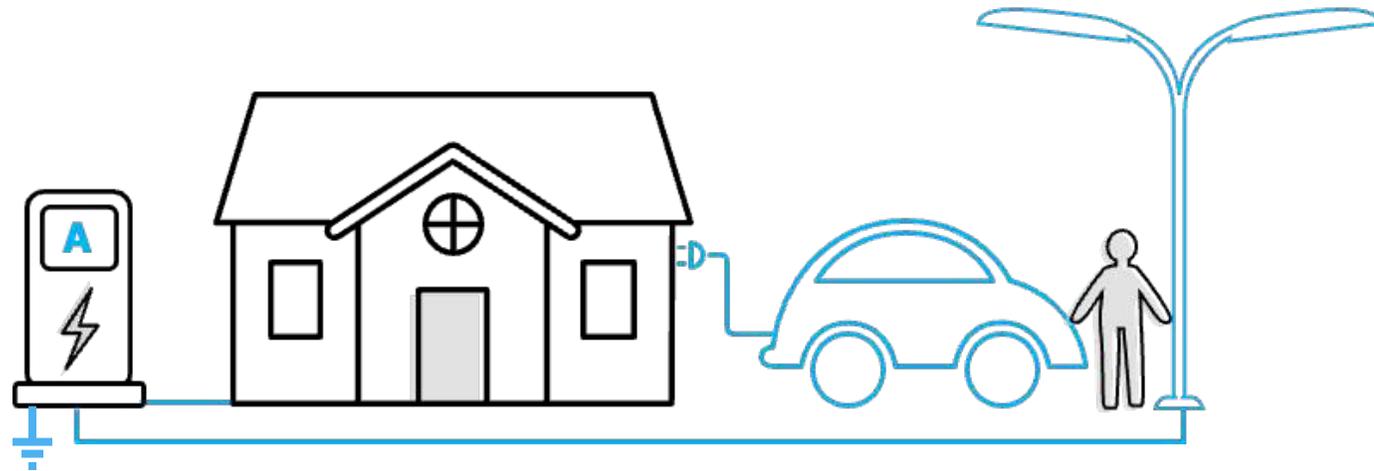
Final responsibility is with the electrician fitting the charger, but XPS operator survey can help ensure good practice is followed

The Simultaneous Contact Mitigation (1/2)

No need for >2.5m separation if all are on same earth:

1. DNO LV wiring check confirms houses and street furniture connected to same substation.
2. Confirm all items are PME-wired.

Store earthing survey details,
share with electrician.

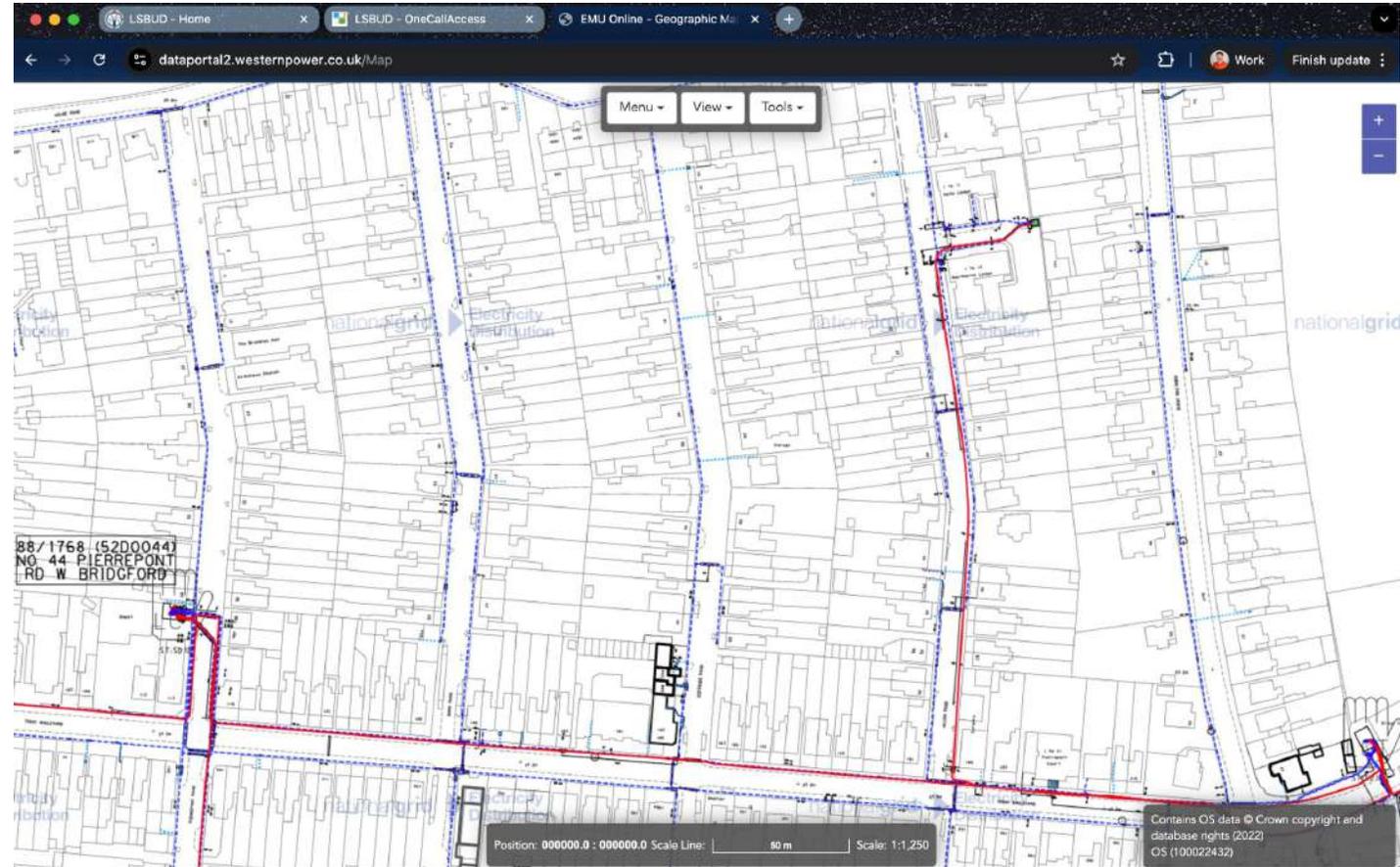


Here the house, car and lamppost are all PME connected to the same earth from substation 'A'

The Simultaneous Contact Mitigation (1/2)

Earthing Check Resources:

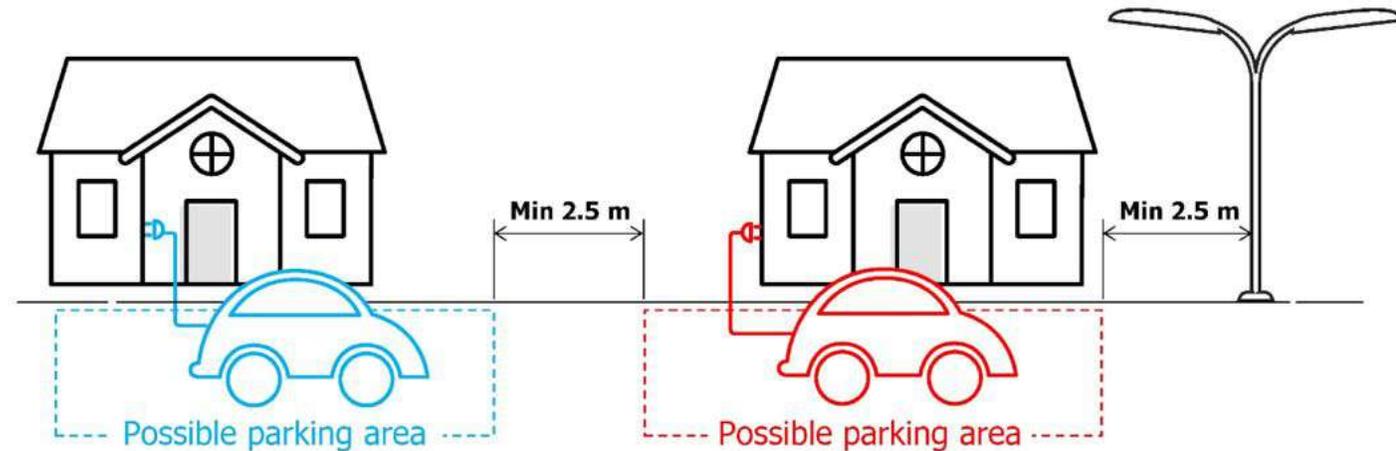
1. VAULT (Scotland) and NUAR (everywhere else once they finish it)
2. LineSearchBeforeYouDig.co.uk
3. NGED realtime wiring:
<https://dataportal2.westernpower.co.uk/>
4. Lighting team confirmation of PME wiring from columns



5. Photo of meter cupboard from applicant

Untethered Chargers and flexible parking: How long is a piece of string (or cable)?

- Vehicles in a designated bay can be considered fixed installations for 2.5m separation check
- Uncontrolled parking and untethered chargers make the situation impracticable to fully control
- Practical advice: consider up to 15m each way for each untethered charger = 30m each way search for any other untethered charger on unknown earthing.



The Simultaneous Contact Mitigation (2/2)

If there are other fixed devices within the 15m distance or untethered sockets within 30m that are on unknown or different earths:

1. Require users with flexible parking to park 2.5m from other charging vehicles or street furniture
2. Require IET01 Method 3 OPDD (or equivalent) to protect in case they break that rule.*

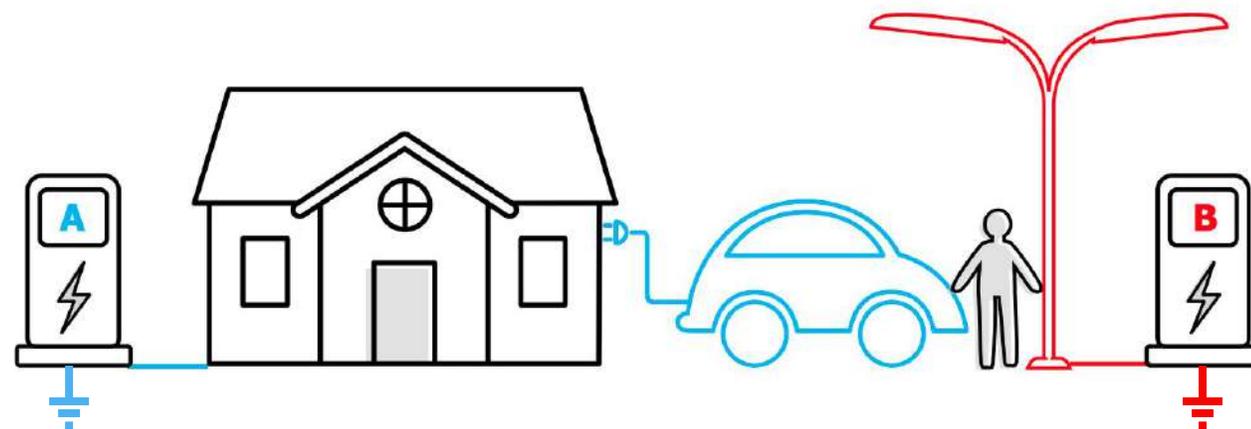
Current Transformer (CT) on CPC/PE trips >21mA



E.g. Myenergi Zappi charger



or Matt:e MTE/A11-100M1b



Here the house, car and lamppost are PME connected to substation A, but the lamppost is connected to substation 'B' and car on a long cable has got too close to the lamp.

*BS7671 requires 2.5m separation between differently earthed electrical installations. It also requires that safety devices are not the only thing preventing electrocution, and thus they can only be used as a backup.

The Simultaneous Contact Mitigation - To Summarise



1: Ensure common earthing for any powered & conductive objects within 2.5m of the charger, channel or *allocated* parking spot.

2: If there are fixed metal objects within 15m or untethered chargers (private or public) within 30m, *unless they also have common earthing* :

i) Require resident only charge when their vehicle is over 2.5m from metal objects or other charging vehicles

AND

ii) require fitting an IET01 Method 1 & 3 OPDD (or equivalent) to provide protection in case they fail to maintain separation, or the earthing situation changes in the future.

Record Keeping: (all guided and done by KerboKlik)

Keep earthing survey data & obtain Electrical Installation Certificate (EIC) from the resident/electrician proving PEN protection and Earth Current Trip Device were fitted if required.

The fire risk from 3 pin plugs and how to mitigate

Problem:



Old, dirty, untested sockets

+

Continuous EV high power demand

=

Fires from overheating

Solution:



- Dedicated BS 1363-2 EV or 32A Commando Socket
- Open PEN protection (plus Earth Current Trip / IET01 Method 3 device if necessary)
- Require EIC submission as proof

5. Q&A



Ben Whitaker
Technical Director
Kerbo Charge



Michael Goulden
CEO
Kerbo Charge

That's a wrap. What's next?



Download Electrical Safety Guide

<https://qrco.de/bgO8lh>



Access the Kerbo Charge knowledge centre

<https://www.kerbocharge.com/local-authority-knowledge-centre>



Contact the team

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