



CUSTOMER GUIDE

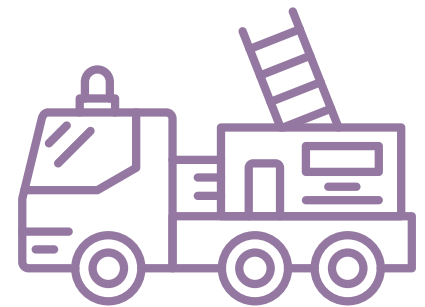
PERSONAL ELECTRIC VEHICLE FIRE HAZARDS



PERSONAL ELECTRIC VEHICLES & FIRE HAZARDS

In recent years there has been a stark rise in the usage of personal electric vehicles (PEVs) including e-scooters, e-bikes and hoverboards. For many these personal transporters provide an alternative and accessible mode to travel and commute in particular those living in big cities. Personal electric vehicles are battery powered and, in most cases, powered by lithium-ion or li-ion batteries. As popularity and usage increases, so too does the risk that fires caused by e-bikes and e-scooter pose to life and property, due to damaged or failing batteries.

In 2023, London Fire Brigade reported that on average they were called to an e-bike or e-scooter fire once every 2 days. In stark comparison, a total of 116 PEV related fires were attended to during 2022. The risk of fire is increased when charging unsafe or damaged batteries. As widely reported in the national press, many shopping centres, rail and transport services have now banned these PEV items from their trains, platforms and premises. Lithium battery fires can spread quickly out of control, and within minutes have started a large fire.



A leading UK charity on electrical safety, [Electrical Safety First](#), commissioned a [report](#) which explains how Lithium-ion batteries can pose a significant risk due to thermal runaway, which occurs when internal temperatures exceed safe limits. This can happen due to flawed design, low-quality components, or improper charging or discharging. If a fire occurs, it may reignite, making these fires particularly dangerous.

WHAT ARE THE WARNING SIGNS YOUR PEV IS A FIRE HAZARDS?

Before a failing lithium battery catches fire, there are often a few warning signs, all of which will require you to take immediate action to stay safe and reduce the risk of fire:

- **Heat:** If your device's battery feels extremely hot to the touch, there's a chance it's defective and may start a fire.
- **Bulging:** A common sign of it failing, if your battery looks swollen, you should stop using it immediately. Similar signs include any type of lump or leaking from the device.
- **Noise:** Failing lithium batteries have also been reported to make hissing or cracking sounds.

- **Smell:** A strong or unusual smell coming from the battery could also be a sign of it failing.
- **Performance:** A failure to fully charge or longer charge times can be a sign that your battery is failing.
- **Smoke:** If your battery or device is smoking, a fire has already started.



If your battery shows any of these signs of failing, immediately turn off the device and unplug it from the power source. Call the device manufacturer or retailer for further instructions. If the device starts smoking or catches fire, raise the alarm, get out, stay out and call 999 immediately.

(Source – [London Fire Brigade](#))

SAFER USE - HOW OWNERS OF PEV'S CAN USE THEM MORE SAFELY

[Electrical Safety First](#), [London Fire Brigade](#) (through its Charge Safe campaign), regional councils including [Dublin City Council](#), [NIFRS](#) and other regional Fire and Rescue services have issued guidance on safer use and reducing the risk of fire when charging e-bikes and e-scooters, including:

- **Don't block your exit/escape route** with charging batteries or e-bikes and e-scooters. Store them somewhere away from a main access point/route. If possible, store them in safe locations such as a garage or a shed.
- Ensure your battery and charger meets the **correct UK safety standards**.
- **Be aware of cheap alternatives** which can be found on online marketplaces which may not be regulated. Be sure to buy your devices and equipment from a trusted retailer who stands over their goods and meets UK Safety Standards.
- **Watch out for signs** that the battery or charger aren't working correctly. If the battery appears hot to the touch or has changed shape it's time to **replace the battery**.
- Always use the correct charger and **buy an official one from a reputable seller**.
- **Let the battery cool** before charging and unplug your charger once it's finished charging. Do not overcharge your battery.
- Always **follow manufacturers' charging instructions** and we advise not to leave it unattended or while people are asleep.
- **Do not use extension leads** or charging strips to charge these batteries.
- **Do not cover chargers** or battery packs when they are charging.
- **Ensure smoke alarms are fitted** where you charge your e-bike / e-scooter / hoverboard or other high powered devices.

