



The Social Housing Safety Network Scotland E-bulletin

E-bikes & scooters

Electrical Safety First: Lithium-ion batteries

Safety tips

Lithium-ion batteries have become widely used in society from small items such as mobile phones and tools to larger transport items such as electric bikes, e-scooters and electric vehicles (EVs), but they are also used for storage facilities for renewable energy. This is due to the unique properties of Lithium-ion batteries which is best summarised as the ability to store an enormous amount of energy in a very small space. This guide concentrates on portable lithium-ion batteries such as those that you can charge in your home.

The ability to store enormous amount of energy in a very small space is also one of the main disadvantages of lithium-ion batteries and can lead to risks of fire and explosion if they are not stored and charged safely.

When used properly, lithium-ion batteries are convenient and safe to use but batteries can present a fire risk when over-charged, short-circuited, or if they are damaged. Charging them safely is really important.

[Here are some simple tips](#) for safe charging of your lithium-ion batteries

Report into dangerous lithium-ion batteries

There is growing concern over the rise in fatalities, injuries and devastating fires from electric bikes (e-bikes) and electric scooters (e-scooters).

Tragically, in the first three months of 2023 alone, fires from lithium-ion batteries used to power these devices had already taken four lives in the UK, left others hospitalised or seriously injured and caused extensive damage to property.

[You can read the report here.](#)

Product recalls

You can find product recalls (and further useful information) related to lithium-ion batteries, [here](#).





On average in 2023, London Fire Brigade have been called to an e-bike or e-scooter fire once every two days. In 2022, LFB attended 87 e-bike and 29 e-scooter fires; a total of 116 fires.

There is a host of useful information on the [LFB website here](#).

Cambridge fire deaths: Fire chief warns about e-bike charging



An e-bike left charging in a flat where a mother and two children died will be examined by investigators, the fire service said.

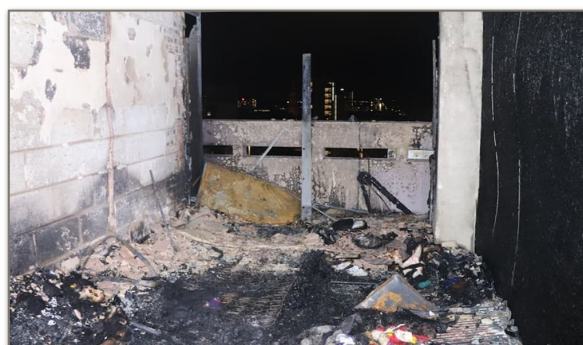
Cambridgeshire Fire Service said the bike was the 'most probable cause' of the blaze in July 2023.

The fire tragically claimed the lives of Mum Gemma Germeney, 31, and her children Lilly Peden, eight, and Oliver Peden, four. Her partner survived after being in a critical condition. [Read the full story here](#).

'Severe' flat fire in Coventry high-rise started by faulty e-bike battery

On 30 September 2023, West Midlands Fire Service (WMFS) responded to reports of a 'severe' flat fire coming from the 11th floor of a 16-storey residential building in Coventry.

Around ten fire appliances were dispatched to the scene, with approximately 50 firefighters swiftly working to bring the flames under control. Supporting the operation were three brigade response vehicles and a hydraulic aerial platform. Crews donned breathing apparatus to tackle the blaze and were able to successfully extinguish the fire within a few hours of their arrival.



[Read the full story here](#)

Following an investigation into the cause of the fire, the service confirmed: "We believe this fire started accidentally as a result of an electric bike battery being left on charge."



OPSS publishes consumer information on e-bike and e-scooter battery safety



The Office for Product Safety and Standards (OPSS) published information for consumers to raise awareness around the safe purchasing, use and charging of e-bikes and e-scooters. This follows a number of fire incidents involving lithium batteries in e-bikes and e-scooters, including in conversion kits.

The information contains messaging around safe use and charging of lithium batteries in e-bikes and scooters, including unplugging when charging has finished, and advice on using manufacturer recommended batteries and chargers.

As with all product safety advice, people are recommended to buy from known sellers and check product reviews before buying. [Download the information here.](#)

How to keep your home safe when charging your e-bike or e-scooter

Lithium batteries are used safely by millions of people every day, and when used properly they are not dangerous, but it's important to be aware of the fire safety advice particularly when charging your battery.

- Don't charge e-bikes and e-scooters in bedrooms or where escape routes can be blocked – for example, hallways.
- Don't leave your battery charging unattended, when you are out or while you are asleep.
- Don't cover chargers or battery packs when charging
- Don't overload sockets or use inappropriate extension leads
- Don't charge or store batteries in direct sunlight or in hot locations (above 45°C)
- Don't charge batteries close to combustible materials or hazardous substances.
- Always unplug your charger when you have finished charging
- If your battery can be removed from your e-bike or e-scooter and charged separately, it should be charged on a hard flat surface where heat can disperse and in area with good ventilation.

[You can read safety advice from FireEngland here](#), including: warning signs your e-bike or e-scooter is a fire hazard, what actions to take if your battery is a fire risk, and how to maintain and safely charge your e-bike or e-scooter.