



Prevention of fires caused by dangerous e-bikes and e-scooters

Advice to businesses on the risks and responsibilities associated with carrying out repairs, modifications and conversions to e-bikes and e-scooters.

Do you carry out repairs, modifications or conversions of e-bikes, e-scooters or their accessories as part of your business?

If so, this advice is for you.



If you carry out repairs and modifications to e-bikes and e-scooters, you must be sure that once you have worked on the e-bike, e-scooter and any associated accessories, that it can be charged and used safely. If you are not sure – then do not take on the work. These products contain lithium-ion batteries that are volatile and can cause fatal fires.

If you take on this work you must:

- be competent to do the work safely;
- operate in accordance with the relevant manufacturer instructions; and
- understand your legal responsibilities.

What's the problem?

- E-bike and e-scooter fires are explosive and can be deadly because of their rapid spread and quick release of noxious gases.
- They often happen in the home, when families are sleeping.
- Tragically, we know of 11 people who have lost their lives since 2022 in an e-bike or e-scooter fire.
- A house fire in Cambridge in June 2023 in which a mother and her two young children died was started by a replacement e-bike battery.
- E-bikes are now the fastest growing source of fires in London. On average, there is an e-bike fire in London once every two days. *[Source London Fire Brigade]*
- Fatal incidents have occurred when repairs have been attempted on lithium-ion (LI) batteries.
- Don't be the business that causes the next one.

What's the solution?

- 1. Chargers and batteries must be safe.** If you are supplying chargers or batteries, you must be sure of the source, and be able to prove they are safe.
- 2. Chargers and batteries must be supplied with adequate warnings and instructions.** If you are supplying chargers or batteries, you must provide customers with required warnings, labelling, and instructions for their safe use.
- 3. All parts, including chargers and batteries need to be compatible with each other, and the e-bike or e-scooter.** Don't mix and match. Just because they connect does not mean they are compatible. The parts you use need to be safe, and you need to be able to demonstrate this through documentation from your suppliers.
- 4. Converted products must be safe.** If you supply parts and convert a bike or a scooter into an e-bike or e-scooter, you are **legally responsible for its safety, and may be liable for any damage caused by any defect.** The section below sets out the laws that apply in this area. You should get advice on the specific legal responsibilities you are taking on.
- 5. Recalled parts and products must not be supplied.** You must have processes in place to ensure that unsafe recalled parts and products are not used. See below for a link to the UK Product Recalls and Alerts system.
- 6. E-bikes and e-scooters should only be modified or repaired in accordance with the manufacturer's instructions, using the approved parts.** If you carry out a modification or repair, you could take on additional legal responsibilities. You should get advice on the specific responsibilities you are taking on.
- 7. Refuse to do work that you don't know to be safe.** If you refuse to do the work for a customer, give them clear information about why, so they know the risks and why they should not attempt to do it themselves.

Where to go for further advice/help

- Read business guidance on electrically assisted pedal cycles (e-bikes)



- Read business guidance on e-scooters



- Read the General Product Safety Regulations 2005



- Read the PAS 7050:2022 Bringing Safe Products to the Market – Code of Practice



- Read the Bicycle Association collection of battery guidance



- Read the Supply of Machinery (Safety) Regulations 2008



- Read the Electrical Equipment (Safety) Regulations 2016



- Read the OPSS statutory guidelines on lithium-ion battery safety for e-bikes



- Find out about Product Recalls and Alerts

