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Safety advice

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

The number of people using e-bikes and e-scooters is growing. These can help people get more active, travel more easily and, like any number of electrical items, they are powered by lithium batteries. 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.

Before a lithium-ion battery catches fire, there may be warning signs that it is about to fail. If you see any of these signs you must take action immediately and stop using your battery to stay safe and reduce the risk of fire.

The warning signs your e-bike or e-scooter battery is a fire hazard

A fire can develop quickly, within a few seconds, and often without warning. Formation of smoke or a white vapour cloud indicate the start of battery failure and fire. Listed below are other signs that your battery is a fire hazard.

You must stop using or charging your battery immediately if you notice any of the following:

- Overheating: If your device's battery feels extremely hot to the touch
- Deformation: If your battery looks swollen. Similar signs include any type of lump or leaking from the device.
- Noise: If your battery is making hissing or cracking sounds.
- Smell: If you notice a strong or unusual smell coming from the battery
- Performance: If your battery does not fully charge or is taking longer to charge than normal
- Smoke: If your battery or device is smoking.

What you must do if your lithium-ion battery is a fire risk

- If the device starts smoking or catches fire, raise the alarm, [get out \(https://fireengland.uk/fire-safety/how-protect-your-home#plan-your-escape\)](https://fireengland.uk/fire-safety/how-protect-your-home#plan-your-escape), stay out and call 999 immediately.
- If your battery shows any signs of failure, turn off the device and unplug it from the power source immediately.
- Call the device manufacturer or retailer for further advice.
- Ensure you report your faulty charger or battery to the [Citizens Advice Consumer Service \(https://www.citizensadvice.org.uk/consumer/get-more-help/if-you-need-more-help-about-a-consumer-issue/\)](https://www.citizensadvice.org.uk/consumer/get-more-help/if-you-need-more-help-about-a-consumer-issue/). They can also provide you with advice on your consumer rights.

How to reduce the risk of fires from your e-bikes or e-scooters' lithium battery

The majority of fires related to e-bikes and e-scooters have happened in homes. These fires often happen when charging batteries. There are a number of ways you can reduce the risk of fire when charging your e-bike or e-scooter battery in the home.

Safely charging your e-bike or e-scooter

- 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 an area with good ventilation.

Fire Safety

- Fit smoke alarms in the area where you charge your batteries and test them once a month to make sure they work.
- Make sure you and your family have an [escape plan in place](https://fireengland.uk/fire-safety/how-protect-your-home#plan-your-escape) (<https://fireengland.uk/fire-safety/how-protect-your-home#plan-your-escape>) in the event of a fire. Always get out then call 999, never try to fight the fire yourself.

Maintaining your e-bike or e-scooter

- Always follow the manufacturer's instructions for charging and using your product.
- Always use the manufacturer-approved battery and charger.
- If you need a replacement battery or charger for your e-bike or e-scooter go directly back to the manufacturer or retailer you bought it from to ensure it's safe.
- Regularly inspect your product and check for damage or warning signs that your battery might be failing and becoming a fire risk.
- Don't attempt to modify or tamper with your battery.

Buying e-bikes and e-scooters

- Only buy e-bikes, e-scooters, chargers and batteries from reputable retailers and manufacturers.
- Check the product is marked with a CE or UKCA mark to ensure they comply with UK product safety standards.
- Check product reviews before buying
- Register your product with the manufacturer to validate any warranties and make it easier for manufacturers to contact you in the event of a safety issue e.g. product recall.
- Check if products have been recalled by visiting the government Product Recalls and Alerts website at: <https://www.gov.uk/guidance/product-recalls-and-alerts> (<https://www.gov.uk/guidance/product-recalls-and-alerts>).

E-Bike conversion kits

- Conversion kits change standard bicycles into e-bikes.
- It is recommended that a professional carries out an e-bike conversion. They will be responsible for ensuring that the e-bike is safe and fitted with the correct motor, battery and charger.
- Installing a conversion kit yourself could lead to safety issues with your e-bike and increase the risk of fire.
- Furthermore, it could invalidate the manufacturer's warranty and make you responsible for any consequent damage or accident. If you modify an e-bike to increase its power or speed then it may no longer be legal to use on public roads

Disposing of a lithium-ion battery

- Lithium-ion batteries should not be placed in the same bins as your regular rubbish or recycling. They can cause a fire if they overheat or when crushed in bin lorries or waste and recycling plants.
- You can find out how to dispose of your lithium-ion battery safely by checking your local authority's website for information about the safe disposal of batteries in your area or you can find your nearest recycling centre at: www.recycleyourelectricals.org.uk (<http://www.recycleyourelectricals.org.uk>).

Using your e-bikes or e-scooter

- Currently, in the UK only e-scooters participating in official rental e-scooter trials may be used legally on roads. Other e-scooters are classed as [Powered Transporters](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.gov.uk%2Fgovernment%2Fpublications%2Fpowered-transporters%2Finformation-sheet-guidance-on-powered-transporters&data=05%7C01%7CKenneth.Luther%40homeoffice.gov.uk%7C315eff71d69849fb139408db8f3f28e0%7Cf24d9) (<https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.gov.uk%2Fgovernment%2Fpublications%2Fpowered-transporters%2Finformation-sheet-guidance-on-powered-transporters&data=05%7C01%7CKenneth.Luther%40homeoffice.gov.uk%7C315eff71d69849fb139408db8f3f28e0%7Cf24d9>) and cannot be used legally on the road. If you use an e-scooter illegally, you could face a fine and penalty points on your licence, and the e-scooter could be impounded.