



Buckinghamshire & Milton Keynes Fire Authority

Meeting and date: Extraordinary Fire Authority, 11 September 2024

Report title: Safety of Lithium-Ion Batteries in E-Bikes and E-Scooters Campaign

Lead Member: Councillor Simon Rouse

Report sponsor: Mick Osborne – Deputy Chief Fire Officer/Chief Operating Officer

Author and contact: Mick Osborne – Deputy Chief Fire Officer/Chief Operating Officer

Action: Approval

Recommendations:

It is recommended that:

1. The Safety of Electric-Powered Micromobility Vehicles and Lithium Batteries Bill proposed by Electrical Safety First intended to ensure greater safety in the use and disposal lithium-ion batteries, which would hopefully have the effect of ensuring greater safety for both members of the public and Firefighters when attending such incidents, be supported.
2. The position that any measures which have the potential to increase awareness, the safety of all along with protecting the environment is something Buckinghamshire & Milton Keynes Fire Authority actively supports, be endorsed.
3. The position that the Authority would like to see regulation and legislation to go further in respect of influencing building regulations for example and appreciates that the National Fire Chiefs Council is engaging with government departments to this end on behalf of UK fire and rescue services, be endorsed.

Executive summary:

Fires caused by lithium-ion batteries in e-scooters and e-bikes have multiplied fourfold since 2020, resulting in deaths, hospitalisations, homelessness, and financial losses. Since 2020, it is reported that over 190 people have been injured, and at least 13 lives have been lost due to this concerning trend. The UK is now facing a projection of nearly one e-bike or e-scooter fire per day this year, a significant leap from just over one per week in 2020.

Electrical Safety First, a UK Charity dedicated to reducing the deaths and injuries caused by electricity is promoting 'The Safety of Electric-Powered Micromobility

Vehicles and Lithium Batteries Bill', see Appendix 1 and seeking support for their campaign.

Many national organisations are already supporting the bill, including the National Fire Chiefs Council, many Fire and Rescue Services, the Association of Ambulance Chief Executives, the Royal Society for the Prevention of Accidents, and the Royal Society for Public Health.

The bill covers:

- **Clause 1: Safety Assurance** - This clause mandates a third-party safety assessment, conducted by a government-approved body, for all e-bikes, e-scooters, and their lithium-ion batteries before they enter the UK market. This process mirrors safety measures in place for other high-risk products like fireworks and heavy machinery.
- **Clause 2: Responsible Disposal** - This clause requires the Government to make regulations ensuring the safe disposal of lithium batteries once their lifecycle ends.
- **Clause 3: Comprehensive Fire Safety** - This clause assigns the Government the responsibility of comprehensively addressing fire-related concerns. **This involves enhancing safe usage, charging, and storage practices for these devices.** It includes setting standards for conversion kits and charging systems and considering a temporary ban on the sale of universal chargers that heighten fire risks.

Financial implications:

There are no direct financial implications associated with this paper

Risk management:

No risks arise to the delivery of the Authority's functions from the recommendations.

Legal implications:

None arising from the recommendations.

Privacy and security implications:

No privacy or security implications have been identified that are directly associated with this report or its appendices.

Duty to collaborate:

There are no opportunities to collaborate directly from this report. However other Fire & Rescue Authorities and partners do support this Bill.

Health and safety implications:

There are no direct Health and Safety implications arising from this report or its appendices.

Environmental implications:

There are no Environmental implications arising directly from this report or its appendices.

Equality, diversity, and inclusion implications:

There are no specific Equality, diversity and inclusion implications arising from this report or appendices.

Consultation and communication:

This report will be circulated throughout the organisation for information and awareness.

Background papers:

None

Appendix	Title	Protective Marking
1	The Safety of Electric-Powered Micromobility Vehicles and Lithium Batteries Bill	N/A
2	Supporting Organisations	N/A

The Safety of Electric-Powered Micromobility Vehicles and Lithium Batteries Bill

A Bill to make provisions regarding the safety of electric-powered micromobility vehicles and of lithium batteries; to give duties to the Secretary of State regarding those matters; and for connected purposes.

1. The safety of electric-powered micromobility vehicles and secondary lithium-ion batteries used to power such vehicles

(1) No person shall after 31st August 2025 place on the UK market any electric-powered micromobility vehicle or a secondary lithium-ion battery used to power such vehicles unless –

(a) conformity assessment procedures have been carried out by a conformity assessment body ('CAB') authorised by the Secretary of State to carry out such assessments; and

(b) the manufacturer has drawn up the technical documentation and declaration of conformity; and

(c) the electric-powered micromobility vehicle and the battery used to power such vehicles bear the CE or UKCA mark to demonstrate conformity with designated or harmonised standards.

(2) The Secretary of State must within 6 months of the passing of this Act publish a list of CABs recognised as being able to carry out conformity assessment procedures pursuant to subsection (1).

(3) Where in the opinion of a CAB, a product covered by this Act has successfully met the essential safety requirements of applicable regulations, it shall issue a certificate of conformity to the manufacturer.

(4) Where a certificate of conformity has been issued pursuant to subsection (3) a manufacturer must display a CE or a UKCA mark on any product covered by this Act before it is placed on the UK market.

(5) No person shall display a CE or a UKCA mark on any product covered by this Act unless a certificate of conformity has been issued for the product given in accordance with this Act.

2. Disposal of Secondary Lithium-ion Batteries

(1) The Secretary of State must, within 6 months of the passing of this Act, make regulations regarding the safe disposal of lithium batteries.

(2) The regulations made pursuant to subsection (1) may include a requirement for sellers of such batteries to:

(a) Display a prominent warning about the dangers of improper disposal of lithium batteries not in accordance with those regulations; and

(b) Attach as part of the sale

(i) Information regarding the cell chemistry of lithium batteries and;

(ii) information regarding the safe disposal of such batteries.

3. Duties of the Secretary of State

(1) (1) The Secretary of State must, within 12 months of the passing of this Act, make regulations

(a) Specifying safety standards for micromobility vehicle conversion kits and associated components; and

(b) Requiring that all micromobility vehicles have either

(i) a non-proprietary charging system with a communications protocol;
or

(ii) a proprietary charging system with a matched charger

and such regulations may include details of the means by which those standards will be enforced and the penalties for failing to comply with those standards.

(2) The Secretary of State must within 6 months of the passing of this Act consult such persons as he considers have an interest in this matter on whether to implement an interim measure which prohibits the sale of universal chargers for electric-powered micromobility vehicles until such time as the regulations detailed in (1) (a) or (1) (b) come into force.

4. Offences

Any person who fails to comply with the terms of this Act commits an offence.

5. Interpretation

In this Act, the following terms have the following meanings:

- 'Electric-powered micromobility' means electric scooters or electric bicycles powered by secondary lithium-ion batteries, as defined in the Department of Transport 2020 publication 'Future of Transport Regulatory Review Moving Britain Ahead Call for Evidence'.
- 'A lithium battery' is a non-rechargeable battery with lithium as an anode.
- 'A secondary lithium-ion battery' is a type of rechargeable battery in which the main reaction is the transport and intercalation of lithium ions into the cathode and anode respectively as defined in the BEIS Research Paper No 2020/037 entitled 'Domestic Battery Energy Storage Systems A Review of Safety Risks'.
- 'A proprietary charging system' comprises of a manufacturer specified plug and socket system designed only to operate in combination with each other.

- 'A non-proprietary charging system' comprises of a non-manufacturer specified plug and socket system consisting of a standardised plug and socket and a communications protocol.
- 'A communications protocol' is a set of formal rules describing how to transmit or exchange data.
- 'A CE marking' means a mark consisting of the symbol "CE" set out in the form specified by the Secretary of State in regulations made pursuant to this Act.
- A 'UKCA' marking is a UK Conformity Assessed marking displayed in the form specified by the Secretary of State in regulations made pursuant to this Act.
- A conversion kit is the electrical drive train, battery and charging system, that is fitted to a regular pedal bicycle to convert it to an electric bike.

6. Regulations

(1) The Secretary of State must, within six months of the passing of this Act, make regulations specifying:

- (a) Any amendments to the definition of the term 'electric-powered micromobility' that, in the Secretary of State's opinion, are necessary.
- (b) The penalties that shall apply to breaches of this Act.

(2) Regulations under this Act shall be made by statutory instrument pursuant to the negative resolution procedure.

7. Extent, Commencement, and Short Title

(1) This Act extends to the whole of the UK, subject to resolutions being passed by

- (a) The Scottish Parliament;
- (b) Senedd Cymru;
- (c) The Northern Ireland Assembly

applying it to their respective countries.

(2) This Act comes into force on the day on which it is passed.

(3) This Act may be cited as the Safety of Electric-Powered Micromobility and Lithium Batteries Act 2023."

