

# North Lanarkshire Council Report

## Environment & Climate Change Committee

Does this report require to be approved?  Yes  No

Ref PB/MM

Date 30/04/25

## Safety of Lithium-ion Batteries Campaign - Electrical Safety First

From Lyall Rennie, Chief Officer (Community Operations)

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### Executive Summary

This report notes that we have been contacted by Mr. Ronald Bailey, in his role as researcher for and on behalf of Lord Foster of Bath, to ask that North Lanarkshire Council supports and endorses the 'Safety of Lithium-ion Batteries Campaign' which is being led by Electrical Safety First (ESF), the campaigning arm of the registered charity, the Electrical Safety Council.

The report notes the action to date in the campaign, which includes asking for the UK government to raise a Bill to make provisions regarding the safety of electric-powered micromobility vehicles and of lithium batteries, and the comments from our Trading Standards staff in respect of the clauses contained in the draft Bill which has been devised by ESF.

### Recommendations

It is recommended that Environment and Climate Change Committee:

- (1) Supports the campaign on the safety of lithium-ion batteries; and
- (2) Endorses the comments on the draft Bill which have been supplied by Trading Standards.

### The Plan for North Lanarkshire

Priority Improve the health and wellbeing of our communities

Ambition statement (14) Ensure the highest standards of public protection

Programme of Work All Programmes of Work

## 1. Background

- 1.1 On 23 April 2024, Early Day Motion (EDM) 661 on the safety of electric powered vehicles and lithium-ion batteries was tabled in the UK Parliament <https://edm.parliament.uk/early-day-motion/62160/safety-of-electric-powered-vehicles-and-lithiumion-batteries>.
  - 1.2 The EDM noted with concern “the rise of fires caused by lithium-ion batteries used to power e-bikes and e-scooters, which have quadrupled since 2020, resulting in 13 deaths, 200 serious injuries requiring hospital treatment and have resulted in homelessness and staggering financial loses”.
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## 2. Report

- 2.1 Mr. Ronald Bailey is a researcher for Lord Foster of Bath and the Parliamentary Adviser to Electrical Safety First (ESF). Lord Foster has been campaigning to improve the safety of lithium batteries (used in e-bike and e-scooters) and their disposal, in the House of Lords.
- 2.2 ESF is the campaigning arm of the Electrical Safety Council <https://register-of-charities.charitycommission.gov.uk/en/charity-search/-/charity-details/257376>, a UK charity dedicated to reducing the deaths and injuries caused by electricity.
- 2.3 Mr. Bailey, in his role as assistant for and on behalf of Lord Foster of Bath, has contacted the Council to ask that we support and endorse the Safety of Lithium-ion Batteries Campaign which is being led by Electrical Safety First (ESF).
- 2.4 The Safety of Electric Powered Micromobility Vehicles and Lithium-ion Batteries Bill, drafted by ESF and experts from key sectors, has already gained the support of a large number of organisations, including the National Fire Chiefs Council, a number of local authorities and the consumer group Which? [Battery Safety campaign | Electrical Safety First](#).
- 2.5 The draft Bill, copy of which is attached as Appendix 1 to this report, calls on the UK Government to prioritise the time to implement the Bill's measures in order to ensure safer access to and use of sustainable transportation.
- 2.6 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, damage to batteries or improper charging or discharging. If a fire occurs, it may reignite, making these fires particularly dangerous.
- 2.7 Thermal runaway is the primary risk associated with lithium-ion batteries. Battery safety and stability depend on maintaining internal temperatures within specific limits. Poor quality and substandard components, flawed design, physical abuse and improper charging or discharging can all cause a battery to become thermally unstable and can lead to catastrophic failure. Even if a fire is extinguished, it is common for the fire to start again, highlighting the dynamic nature of lithium-ion battery fires.
- 2.8 Fires caused by substandard lithium-ion batteries in e-scooters and e-bikes have continued to rise in numbers in recent years, and the London Fire Brigade reported on 5 February 2025 on the urgent risk as two London homes were gutted and two dogs killed, less than 24 hours apart, in e-bike and e-scooter fires: [Urgent warning after London homes gutted and two dogs killed less than 24 hours apart in e-bike and e-scooter fires | London Fire Brigade](#)

- 2.9 In July 2022, a house fire in North Lanarkshire, which tragically claimed the lives of two individuals, was caused by an e-bike battery that was being charged at the time.
- 2.10 In 2022, a consignment of over 150 e-scooters, e-bikes and hoverboards, destined for a North Lanarkshire distributor, was stopped at the port (i.e. the border control point) by Falkirk Trading Standards, and a sample was sent for testing. After being under test for 4 hours and 37 minutes, the lithium-ion battery exploded. This demonstrated that the charge controller/battery management system (BMS) failed to protect the battery pack from thermal runaway. The BMS was explosively ejected from the battery pack and cells were found around 7m away. Flames from the explosion and ensuing fire were over 2m high. As a result, the consignment was prohibited from free circulation.
- 2.11 Whilst our Trading Standards colleagues are in agreement that we should as an organisation support this campaign, they have suggested that we offer specific comments in respect of clauses 1, 2 and 3 of the draft Bill. These comments are attached as Appendix 2 to this report, and we would ask that elected members agree to these comments being returned to Mr. Bailey in conjunction with our support of the campaign.

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### **3. Measures of success**

- 3.1 Securing UK Government agreement to the raising of a Bill and effectively implementing the necessary legislative changes to improve the safety of lithium-ion batteries and ensuring that:
- no person can place an e-scooter, e-bike or lithium-ion battery on the market unless conformity assessment procedures have been carried out by a recognised body;
  - the manufacturer has drawn up the technical documentation and declaration of conformity;
  - e-bikes, e-scooters and their batteries bear the CE or UKCA mark to demonstrate conformity with designated or harmonised standards;
  - sufficient legal rules are in place for the safe end-of-life disposal of lithium-ion batteries;
  - safety standards are specified for e-bike conversion kits and associated components.

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### **4. Supporting documentation**

- 4.1 Appendix 1 - 'The Safety of Electric-Powered Micromobility Vehicles and Lithium Batteries Bill' drafted by the ESF.
- 4.2 Appendix 2 - Trading Standards comments on the draft Bill.



**Lyall Rennie**  
**Chief Officer (Community Operations)**

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## 5. Impacts

<b>5.1 Public Sector Equality Duty and Fairer Scotland Duty</b> Does the report contain information that has an impact as a result of the Public Sector Equality Duty and/or Fairer Scotland Duty? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, please provide a brief summary of the impact?  If Yes, has an assessment been carried out and published on the council's website? <a href="https://www.northlanarkshire.gov.uk/your-community/equalities/equality-and-fairer-scotland-duty-impact-assessments">https://www.northlanarkshire.gov.uk/your-community/equalities/equality-and-fairer-scotland-duty-impact-assessments</a> Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>5.2 Financial impact</b> Does the report contain any financial impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant financial impacts been discussed and agreed with Finance? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?
<b>5.3 HR policy impact</b> Does the report contain any HR policy or procedure impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant HR impacts been discussed and agreed with People Resources? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?
<b>5.4 Legal impact</b> Does the report contain any legal impacts (such as general legal matters, statutory considerations (including employment law considerations), or new legislation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant legal impacts been discussed and agreed with Legal and Democratic? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?
<b>5.5 Data protection impact</b> Does the report / project / practice contain or involve the processing of personal data? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, is the processing of this personal data likely to result in a high risk to the data subject? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, has a Data Protection Impact Assessment (DPIA) been carried out and e-mailed to <a href="mailto:dataprotection@northlan.gov.uk">dataprotection@northlan.gov.uk</a> Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>5.6 Technology / Digital impact</b> Does the report contain information that has an impact on either technology, digital transformation, service redesign / business change processes, data management, or connectivity / broadband / Wi-Fi? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, please provide a brief summary of the impact?

Where the impact identifies a requirement for significant technology change, has an assessment been carried out (or is scheduled to be carried out) by the Enterprise Architecture Governance Group (EAGG)?

Yes  No

**5.7 Environmental / Carbon impact**

Does the report / project / practice contain information that has an impact on any environmental or carbon matters?

Yes  No

If Yes, please provide a brief summary of the impact?

**5.8 Communications impact**

Does the report contain any information that has an impact on the council's communications activities?

Yes  No

If Yes, please provide a brief summary of the impact?

**5.9 Risk impact**

Is there a risk impact?

Yes  No

If Yes, please provide a brief summary of the key risks and potential impacts, highlighting where the risk(s) are assessed and recorded (e.g. Corporate or Service or Project Risk Registers), and how they are managed?

**5.10 Armed Forces Covenant Duty**

Does the report require to take due regard of the Armed Forces Covenant Duty (i.e. does it relate to healthcare, housing, or education services for in-Service or ex-Service personnel, or their families, or widow(er)s)?

Yes  No

If Yes, please provide a brief summary of the provision which has been made to ensure there has been appropriate consideration of the particular needs of the Armed Forces community to make sure that they do not face disadvantage compared to other citizens in the provision of public services.

**5.11 Children's rights and wellbeing impact**

Does the report contain any information regarding any council activity, service delivery, policy, or plan that has an impact on children and young people up to the age of 18, or on a specific group of these?

Yes  No

If Yes, please provide a brief summary of the impact and the provision that has been made to ensure there has been appropriate consideration of the relevant Articles from the United Nations Convention on the Rights of the Child (UNCRC).

If Yes, has a Children's Rights and Wellbeing Impact Assessment (CRWIA) been carried out?

Yes  No



## Appendix 1

### **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) 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:

(c) Any amendments to the definition of the term 'electric-powered micromobility' that, in the Secretary of State's opinion, are necessary.

(d) 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."



## **Appendix 2**

Trading Standards' comments in respect of clauses 1, 2 and 3 of the draft Bill.

**In respect of clause 1** – the requirement to have conformity assessment procedures undertaken by an appropriate and independent authorised body could be achieved by amending provisions within the Supply of Machinery (Safety) Regulations 2008. Regulation 7 currently places requirements upon manufacturers or their authorised representatives but there are no obligations placed on importers or relevant persons within the UK market. This could be remedied by amending Regulation 2 of the Regulations to state:

“responsible person” means, in relation to machinery or partly completed machinery—

- (a) the manufacturer of that machinery or partly completed machinery; or
- (b) the manufacturer's authorised representative; or
- (c) if there is no manufacturer or manufacturer's authorised representative within the UK, the importer of the product; or
- (d) if the importer is not based within the UK, the distributor of the product.

**In respect of clause 2** - regulations regarding the safe disposal of lithium batteries are already implemented, namely the Waste Batteries and Accumulators Regulations 2009. The recommendations that you propose in Clause 2(2) could be implemented by amendment of Regulation 68 of the 2009 Regulations, or alternatively by amendment of the Batteries and Accumulators (Placing on the Market) Regulations 2008.

**In respect of clause 3** – specifying safety standards for vehicle conversions would be welcomed and adherence to regulatory controls could be required of all service providers, however this would need to be allied to a public awareness message and a targeted campaign to highlight the dangers to individuals who would wish to purchase and fit such conversion kits themselves.