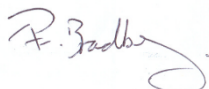


LONDON BOROUGH OF CAMDEN	WARDS: ALL
REPORT TITLE Fire Safety Risks Associated with Lithium-ion Batteries	
REPORT OF Director of Environment and Sustainability	
FOR SUBMISSION TO Culture and Environment Scrutiny Committee	DATE 11 September 2023
<p>SUMMARY OF REPORT</p> <p>Research has shown that there is a graduated risk of a lithium-ion batteries igniting. These batteries are used in electric vehicles, e.g. bikes, scooters, wheelchairs and mobility scooters.</p> <p>The number of fires caused by lithium-ion batteries is increasing. It is an international issue to which Department of Business and Trade has developed a national response. Fire safety advice has been issued by the London Fire Brigade.</p> <p>The report provides information relating to fire risk associated with lithium-ion batteries, the management of lithium-ion powered vehicles in council building and fire safety information provided to residents and retailers.</p> <p>Local Government Act 1972 – Access to Information</p> <p>No documents that require listing have been used in the preparation of this report.</p> <p>Contact Officer: Richard Bradbury, Director of Environment and Sustainability Telephone: 020 7974 3725 Email: richard.bradbury@camden.gov.uk</p>	
<p>RECOMMENDATIONS</p> <p>That the Culture & Environment Scrutiny Committee:</p> <ul style="list-style-type: none"> i) Note and provide feedback on any aspect or issue raised in the report. ii) Identifies any further information it would like to receive. 	

Signed:



Date: 29 August 2023

1. Purpose of Report

- 1.1. The purpose of this report is to provide the Committee with information relating to fire risk associated with lithium-ion batteries used in electric powered personal vehicles (e.g. electric bikes, scooters, wheelchairs and mobility scooters) and the Council's management of lithium-ion powered vehicles in its building, including:
- Information provided to council tenants, leaseholders and those living in the private rented sector;
 - An action plan to devise a safety procedure based on the relative risks associated with different e-bike manufacturing options, battery usage and charging to allow employees and visitors to bring e-bikes (and e-scooters) into Council work premises, and;
 - Trading Standards engagement with relevant local businesses.

2. Background

- 2.1. Recent research has shown that there is a graduated risk of a lithium-ion battery igniting, based on the manufacturing provenance of an e-bike or e-scooter, and whether the battery is on stand-by/turned off or charging. According to the [London Fire Brigade](#), problems most usually occur when lithium-ion batteries are being charged, with increasing risk as the battery ages, or has been knocked or damaged during use or carrying. London Fire Brigade recommends batteries are charged on a hard flat surface, with no exposure to extreme temperatures, and that they are allowed to cool after before charging allowing heat to dissipate.
- 2.2. The Office for Product Safety & Standards, the national regulator for product safety which forms part of the Department of Business and Trade, have an extensive work programme focussing on the safety concerns associated with lithium-ion batteries. This includes:
- Reviewing all information on fires associated with Lithium-ion batteries e-bikes/scooters and conversion kits;
 - Continue to work closely with the 'big 5' marketplace platforms (Amazon, eBay, Etsy, Wish and Alibaba) and to expand this work to other platforms;
 - Online Supply Chain Enforcement Team is tackling the issue in a holistic way looking throughout the supply chain, including investigations and enforcement;
 - Pending publication of data on test purchasing and testing results from online platforms;
 - Undertaking a safety study to understand the risk of the products and their use;
 - Commissioned research on batteries commonly used in such products, and;
 - Introduction of a national operation name for any intelligence submissions to the national intelligence database (IDB).

2.3. The Bicycle Association (the national trade association for the UK cycle industry) has issued [guidance](#) on the fire risks of e-bikes. E-bikes that are rigorously tested to recognised international standards (e.g. UN 38.3, UL 2848 or BS EN 50604) are of considerably lower risk of igniting than e-bikes and 'adaption kits' that are purchased from the wider, largely unregulated, international markets.

3. Council's response to the fire risk associated with lithium-ion batteries

(i) Information provided to residents

3.1. Fire safety information about lithium-ion batteries is available on [Camden Council's website](#) including a fire safety video produced with the London Fire Brigade borough commander. Information provided to residents includes:

- only buy batteries from a trusted seller to make sure they meet safety standards;
- follow the manufacturers' instructions to charge the battery and unplug the charger when you've finished using it;
- charge batteries on hard flat surfaces so that they don't overheat;
- never leave a battery charging when you're asleep or away from home;
- check batteries regularly to make sure they are in good condition – they can be dangerous if they have been damaged;
- keep batteries out of sunlight and put them somewhere cool, especially on hot days, and;
- leave the battery to cool down after you have used your vehicle before charging again.

3.2. In July 2023, following a tragically fatal fire in a Camden property, information was sent to (see letter in appendix 1) all council tenants and leaseholders informing them of the fire risks associated with lithium-ion batteries and that charging and storing them is not permitted in communal areas. Guidance was included on how lithium batteries can be safely stored and charged.

3.3. Information is also available on the Camden Private Renters website with a link to the London Fire Brigade's advice on e-bike, e-scooter or spare batteries and chargers.

(ii) Management of lithium-ion powered vehicles in council buildings

3.4. Camden Council is committed to encouraging sustainable travel and supports the safe and legal use of e-bikes and e-scooters. E-bikes are included in the cycle-to-work offer, enabling staff to access favourable finance options to purchase e-bikes. And as e-bikes are valuable items, it is not advisable to lock them up in public spaces outside Council offices. This presents a difficult situation for staff that are reliant on e-bikes to travel to and from work.

- 3.5. Many departments of Camden Council now own and use e-bikes for staff to use during their work. These bikes are bought from reputable, certified European companies, with batteries (and the bikes) regularly serviced and certified to meet the highest consumer certification standards - UL 2849, which has strict requirements for electrical shock, mechanical, and fire hazards.
- 3.6. An action plan for the storage of e-bikes in Council buildings has been put in place to ensure a safety procedure based on the relative risks associated with different e-bike manufacturing options, battery usage and charging. This includes information being provided for every private e-bike intending to be stored within Council premises (outside or inside). This information must include evidence that the e-bike and battery:
- Meet relevant international standards such as **UN 38.3, UL 2848 or BS EN 50604, and proper CE / UKCA marking of the pack and charger**, and;
 - **N 38.3, UL 2848 or BS EN 50604, and proper CE / UKCA marking of the pack and charger**; Random spot checks of bicycle parking in Council premises by operational leads, or visiting property managers, as appropriate.
- 3.7. Privately owned e-scooters are currently illegal to use on the public-highway and so should not be used to journey to Council offices, or travel during the working day. Thus, the impact of the ban on private e-scooters would be minimal. E-scooters that are allowed on the public highway as part of the trial of commercial hire facilities are not permitted to be brought inside private buildings, so are not affected by this ban either.

(iii) Engagement with retailers

- 3.8. As part of ongoing work, Trading Standards officers have completed visits to retailers and cycle repair premises in the borough. The level of knowledge of the regulations, sourcing of products, and product knowledge was positive. Overall, Trading Standards have confidence that relevant Camden businesses are broadly compliant with legislation.
- 3.9. Trading Standards are undertaking further work with one retailer who sells second hand e-bikes and will also undertake conversion work.
- 3.10. Retailers were provided with London Fire Brigade posters with QR codes linked to the charging safely section on the London Fire Brigade's website, which they agreed to display with one retailer to include the link on their website.
- 3.11. Retailers expressed concern about the increase in e-bikes on the road that have been adapted including, but not exclusively, food delivery riders with e-bikes that have been modified, possibly on DIY basis. This allows the bikes to go further and faster by adding additional batteries, changing the motor,

removing the pedal assisted element.

4. Finance Comments of the Executive Director Corporate Services

- 4.1. The Executive Director Corporate Services has been consulted and has no comments to add.

5. Legal Comments of the Borough Solicitor

- 5.1. The Borough Solicitor has been consulted and comments included within the report.

6. Environmental Implications

- 6.1 Road transport accounts for approximately 40% of air pollution in Camden and around 15% of greenhouse gases that drive climate change. Exposure to air pollution is estimated to cause 36,000 premature deaths each year – 20 times more than the number of deaths caused by road traffic collisions. Of these, 4,100 are in London, and in Camden, particulate matter (PM) air pollution is responsible for 7% of all deaths. Air pollution also carries a huge cost for our health and social care systems; estimated at approximately £5.3bn by 2035 if action is not taken to improve air quality.
- 6.2 Air pollution also has a disproportionate impact upon the health of Black, Asian and minority ethnic communities and upon residents living in low-income neighbourhoods, because they are typically exposed to higher pollutant concentrations and are also more likely to experience other environmental, social or health factors which can exacerbate vulnerability. Children, older people and people with existing health conditions are also more susceptible to health damage caused by exposure to air pollution.
- 6.3 To address these environmental and public health concerns, the Council committed in 2018 to work towards the World Health Organization's (WHO) 2005 guidelines for air quality, and in March 2022 the Council reaffirmed its commitment to target the WHO's updated guidelines (published September 2021), to be achieved borough-wide by 2034.
- 6.4 Appropriately regulated e-bikes with batteries and chargers that meet relevant international standards such as UN 38.3, UL 2848 or BS EN 50604 form an important part of the solution to reducing air pollution and greenhouse gas emissions from road transport in Camden.

REPORT ENDS