Lancashire Combined Fire Authority

Performance Committee

Meeting to be held on Wednesday 6 March 2024

Lithium-ion batteries campaign

Contact for further information – Stephanie Collinson, Head of Communications
Tel: 01772 866787

Executive Summary

Fires in the home involving lithium-ion batteries are a growing risk nationally particularly with the growth in popularity of e-bikes and e-scooters. A campaign was delivered in December 2023 to gain more insight into those most at risk and the behaviours contributing to fires, and to help people adopt safer practices to prevent fires.

Recommendation(s)

The performance committee is asked to note the report.

Information

Lithium-ion batteries are the rechargeable batteries found in a wide range of electrical items, such as e-scooters and e-bikes, mobile phones, and laptops. They store a significant amount of energy in a very small space and are much more powerful than other types of battery.

In the UK fires caused by lithium-ion batteries in e-scooters and e-bikes have multiplied fourfold since 2020, resulting in deaths, hospitalisations, homelessness, and staggering financial losses. Since 2020, over 190 people have been injured, and at least 13 lives have been lost due to this concerning trend[i].

In Lancashire, there has been a year on year rise in lithium-ion battery related fires in the last three years, and three quarters of them involved a charger. When batteries are charged in communal areas or escape routes, a fire can quickly block the way out. On occasions batteries can fail catastrophically; they can explode and lead to a rapidly developing fire.

	2020-21	2021-22	2022-23	Total
Number of incidents	14	27	35	76

Insight the Service was able to determine from incident data included:

- 29% of incidents involved e-bikes, e-scooters, or hoverboards.
- Fires had mainly started in a bedroom or living room.
- The most fires have occured in Preston, Blackpool, and Lancaster but all districts in Lancashire have seen incidents of this nature.
- Half of incidents occurred between 3pm and 11pm.

The campaign was implemented during December in the run up to Christmas, when people were expected to buy electrical goods, e-bikes, and e-scooters in particular, as presents.

Campaign objectives

- To raise awareness of safety risks associated with e-charging.
- To educate the public on how to safely charge e-scooters and e-bikes.
- To gain insight into those most at risk and practices that increase risk.

Target audience

- Households that have e-scooters/bikes to use as fun for teenagers.
- Students who use this as a cheaper alternative method of transport (which is an increasing trend) aged 18-30.
- Those aged between 25-45 and most likely to have children covering a range of ages and most likely to use or purchase electric goods.

Key messages

- Always use the charger that came with your device.
- Never charge lithium batteries on your escape route. If possible, charge and store them away from your living areas.
- If you need to buy a replacement battery or charger, always choose a branded, genuine product from a supplier you can trust. There are lots of fakes out there, and it can be difficult to spot the difference.
- Never store lithium batteries together, there is an issue of potential battery short circuits if for example the box is contaminated with a metal item, like a paper clip. Ensure terminals have been taped up before mixing with other items.
- Always read the safety instructions that came with the device.
- Ensure you have working smoke alarms on every floor.

Competition to win an iPad

The first part of the campaign involved a competition to win an iPad. To enter, members of the public had to answer three short questions about charging practices. The entry process gave all participants the correct answers to the questions to highlight the safest practices.

The competition resulted in over 1,700 entries and gave valuable insight into charging habits across different age groups. It showed that 25-34 year olds were more likely to charge devices in the hallway. This insight was used in the second part of the campaign to target 25-34 year olds with a specific message about the risk of charging in hallways.

Campaign activity

The creative materials for the campaign featured real images of e-bike and e-scooter fires the Service has attended to demonstrate that these incidents do occur and could happen to anyone. A short animated video was also created in the style of a text message conversation and featuring an image of a real e-bike fire which broke out the

first time the owner charged it, aimed at attracting the attention of the younger target audience.

The following channels were used to share the content and key messages:

- Social media platforms: Facebook, X, TikTok, Instagram, and Nextdoor.
- Lithium-ion battery safety page on the Service's website (www.lancsfirerescue.org.uk/batteries).
- Media release to local news outlets.
- 20,000 leaflets and posters distributed to local schools, colleges, and communities containing QR code linked to lithium-ion battery safety page on the website.

Bin wagons in Lancaster

During the campaign, the Service partnered with Lancaster City Council to create artwork to highlight the risk of e-charging, which now appears on 43 vehicles across Lancaster.

Evaluation

In total, the campaign reached 494,850 people and generated 23,247 engagements (comments, shares, website clicks etc). Social media alone reached 301,389 people and generated 22,441 engagements. Advertising on TikTok boosted competition entries from 18-24 year olds by 197%. Social media posts sparked a lot of debate, with some people sharing their surprise to learn about the risk of e-charging and others sharing their own experiences. Some people stated that they normally charged items in living areas and would now change this.

1,789 people entered the competition and took part in the quiz allowing us to promote the key safety messages and highlight unsafe practices. 4,062 people visited the lithium-ion battery safety page on the website during the campaign. 450 visits came directly from the QR code on campaign leaflets. Five news articles appeared in the local media.

Next steps

The next steps are to build on insight gained from this campaign to develop the picture of who is most at risk and the behaviours that contribute to fires, alongside analysing incident data at the end of the year.

Nationally, the National Fire Chiefs Council has backed charity Electrical Safety First's calls for improved safety standards of e-bike and e-scooter batteries. A change in legislation is needed to help prevent fires and ensure that the products in people's homes are safer.

The safe disposal of lithium-ion batteries is also a key issue, as batteries thrown in household rubbish bins have been linked to an increase in waste fires. Research has shown that lithium-ion batteries are responsible for around half of all waste fires occurring in the UK each year, costing the UK economy some £158 million annually[ii].

Business risk

None.

Sustainability or Environmental Impact

The campaign used mainly digital communications and the leaflet was distributed digitally where possible, to ensure printed leaflets were only used to target those less likely to access digital communications on this subject. Increased awareness levels of safe lithium-ion battery use supports the positive sustainability impact of using rechargeable batteries and devices.

Equality and Diversity Implications

A full equality impact assessment was carried out for the campaign and the creative materials were produced following accessibility principles. All digital content was accessible, meaning it was easier for people with disabilities to access online.

Data Protection (GDPR)

Will the proposal(s) involve the processing of personal data? Y
Personal data was collected as part of the competition and processed in line with GDPR requirements.

HR implications

None.

Financial implications

The total cost of campaign was £1,420 which was funded through the corporate communications departmental budget.

Legal implications

None.

Local Government (Access to Information) Act 1985

List of background papers

None

Reason for inclusion in Part 2 if appropriate: None

[i] Electrical Safety First: The Safety of Electric-Powered Micromobility Vehicles and Lithium Batteries Bill, 2023
[ii] Eunomia: Lithium-Ion Battery Waste Fires Costing The UK Over £100m A Year, 2021