

<b>MEETING:</b>	Bath & Northeast Somerset Health and Wellbeing Board
<b>MEETING DATE:</b>	7 <sup>th</sup> November 2024
<b>REPORT OF:</b>	Steve Quinton Area Manager Avon Fire and Rescue Service
<b>SUBJECT:</b>	Lithium Battery Safety Bill

## 1. **SUMMARY**

- 1.1 This report provides members of the Health and Wellbeing board with information concerning the proposed Lithium-ion Battery Safety Bill and the work of Avon Fire and Rescue Service (SAF&RS) and the Fire and Rescue Services (FRS) nationally that flows from its introduction.

## 2. **RECOMMENDATIONS**

The Board is asked to:

- a) 'To note' the report

## 3. **BACKGROUND**

- 3.1 Lithium-ion batteries are the most popular type of rechargeable battery and are used in a wide range of electrical devices worldwide, from mobile phones to electric vehicles. They can store a large amount of energy and can support very high power demands. They can be charged hundreds to thousands of times and can be very light which makes them useful for powering portable devices.
- 3.2 Lithium-ion technology is generally safe, but improper design, manufacturing and/or damage can lead to 'thermal runaway'. This is one of the primary risks related to lithium-ion batteries, in which they enter an uncontrollable, self-heating state that can result in them ejecting gas, shrapnel and/or particulates and extremely high temperatures leading to fires.
- 3.3 Poor quality and substandard components, flawed design, physical abuse and improper charging or discharging can all cause a battery to become thermally unstable", leading to catastrophic failure. In the case of lithium-ion battery fires even if a fire is extinguished, it is common for the fire to start again.

- 3.3 Fires involving Lithium-ion batteries are on the increase nationally and we have seen an increase in the Avon Fire Authority area. This increase in the main is due to the increase in the use of e-scooters and e-Bikes. With an increased use of e-bikes and e-scooters, comes a corresponding fire safety concern associated with their charging and storage.
- 3.4 In 2022 a fire occurred in a High Rise block of Flats in Bristol. The resulting fast developing high temperature fire resulted in the tragic loss of life of one of the occupants who fell from the 16<sup>th</sup> floor window. The resulting investigation attributed the fire to an e-bike which was charging in the corridor of the flat. The fire subsequently blocked the means of escape for the occupants. Whilst one person did escape through the front door two others were rescued from another window on the 16<sup>th</sup> floor. At the subsequent coroner's inquest the district coroner for Avon, Maria Voisin issues a Regulation 28 letter (Prevention of Future Fire Deaths).
- 3.5 One of the main issues associated with e-bike fires is the use of unregulated conversion kits. These kits are bought from online marketplaces and individuals convert their standard bike to an e-bike. However, there are significant risks in doing this and as a Service we have significant concerns about this practice.
- 3.6 Locally and Nationally we welcome the introduction of this bill. The bill will make regulations that ensures products must meet prescribed safety standards and also regulate the standards of conversion kits.
- 3.7 Due to recent media campaigns and Fire and Rescue service sharing their concerns Ebay has made the decision that only eligible business sellers will be allowed to list e-bikes and e-scooters after the 31st October 2024. This is a welcome development and we encourage other online marketplaces to adopt the same approach.
- 3.8 It should also be noted that incidents involving battery fires have also risen. The fire service has seen an increase nationally and in 2023 over half of the 200 waste fire were caused by lithium-ion batteries.

#### **4. THE BILL**

- 4.1 The bill is a private member's bill sponsored by Lord Redesdale. It would provide for regulations concerning the safe storage, use and disposal of lithium-ion batteries.
- 4.2 The bill comprises 10 clauses.

**Clause 1** sets out that the bill has two purposes:

- to better protect householders and communities from the dangers of lithium-ion batteries

- to increase public confidence in, and acceptance of, battery energy storage systems (BESS)

**Clause 2** would mandate planning authorities to consult the Environment Agency, the Health and Safety Executive and the local fire and rescue service before approving a planning application for stand-alone BESS that consist partly or wholly of lithium-ion batteries.

**Clause 3** concerns the safety of lithium-ion batteries sold online. It would mandate ministers to make regulations requiring the “operator of any online marketplace to take reasonable steps” to ensure that all goods containing lithium-ion batteries offered for sale complied with safety requirements.

**Clause 4** concerns the safety of e-scooters and e-bikes containing lithium-ion batteries. It would mandate ministers to publish a list of conformity assessment bodies (CABs) and prohibit anyone selling on the UK market an e-scooter or e-bike powered by a lithium-ion battery unless the vehicle had been assessed and carried the CE or UKCA conformity marks.

**Clause 5** would mandate ministers to make regulations regarding safety standards for conversion kits using lithium-ion batteries and the use of proprietary or non-proprietary e-scooter or e-bike charging systems powered by lithium-ion batteries.

**Clause 6** concerns the disposal of lithium-ion batteries. It would mandate ministers to make regulations requiring the sellers of such batteries to “display a prominent warning about the dangers of improper disposal of such batteries” and, as part of the sale, attach information regarding the cell chemistry of lithium-ion batteries and about how to dispose of such batteries safely.

**Clause 7** would require ministers to consult “representatives of such persons that they consider to have an interest in this matter” before making any regulations.

**Clause 8** would provide for the interpretation of terms used in the bill.

**Clause 9** would provide for all regulations under the bill to be subject to the negative procedure.

**Clause 10** would provide for the bill’s extent, commencement and short title. The bill would extend to the whole of the UK, but would not apply in Scotland, Wales or Northern Ireland until a resolution agreeing to the bill’s provisions had been passed by each nation’s devolved legislature.

- 4.3 The bill will also address the issue of Large battery storage sites. AF&RS are seeing increased applications for these sites. AF&RS are not currently a

statutory consultee however are involved in providing advice in relation to operational response matters.

## **5. FIRE SERVICE ACTIONS**

- 5.1 As a result of the increase in fires all Fire and Rescue services are actively highlighting the dangers associated with Lithium-ion batteries. Advice is given on product safety and how to charge and look after your items such as mobile phones, e-bikes and e-scooters.
- 5.2 AF&RS were recently interviewed alongside colleagues from the National Fire Chiefs Council (NFCC) highlighting the dangers associated with e-bike conversion kits. We have updated our advice on battery safety and have worked with local Authorities in developing safety messages and procedures in High Rise blocks of flats.
- 5.3 In response to a rising number of fires involving e-bikes and e-scooters, AF&RS teamed up with Deliveroo to educate riders on safe batter charging practices. This year alone, we have witnessed 57 fires linked lithium-ion batteries highlighting the urgency of addressing this issue. On Tuesday, 17 September, Deliveroo riders gathered in Bristol City Centre for a Rider Roadshow. During the event, firefighters spoke to riders about the potential dangers of e-bike and e-scooter fires, showing just how rapidly they can spread and the intensity of these incidents. Riders received key advice on how to use, charge, and store their e-bikes and e-scooters safely.

## **6. APPENDICES**

1. Lithium-ion Battery safety Bill Briefing Paper (HL)
2. Lithium-ion Battery Safety Bill [HL]
3. Regulation 28 Report to prevent future fire deaths A. Oryakhel

## **7. REPORT CONTACT**

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