

Tyne and Wear Fire and Rescue Service

Creating the Safest Community



Electric vehicle fire incidents in the Tyne & Wear region: 1st January 2018 – 31st October 2023

Data, Intelligence and Safety

Date: April 2023

Data and Information Audit	
Data compiled by:	AM
Checked by:	RB
Data valid at:	31/10/2023 00:00:00
Approved for Publication	
Approved by:	Ross Hall
Date Approved by:	15/11/2023

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1 Request

For the purpose of statistical analysis related to electric vehicle fires, I request information on individual cases of electric vehicle fire incidents that have occurred in Tyne and Wear in the last 5 years (2018-2023). The information I am seeking includes:

- Number of EV fires from Jan. 2018 – Current.
- Please include a breakdown of types of vehicle in the data (car, bus/coach, e-bike/e-scooter, etc)
- Please include details on day, month, year, location cause of fire, fire spread and injuries/fatalities as a result of the fire.
- If possible, can you provide any details on the vehicle or battery Information, or if the batteries had a battery management system or state of health monitoring?

2 Reply

2.1 The following information is taken from Tyne and Wear Fire and Rescue Service (TWFRS) Incident Recording System (IRS).

An IRS incident record is completed by the Officer in Charge for every incident attended.

2.2 This is the total number of incidents attended by TWFRS within the Tyne and Wear region between the dates 1st April 2018 to 31st October 2023.

2.3 After querying with the requestor it was confirmed that they also wanted to include when batteries from electric vehicles were on charge and also deliberate fires involving electrical vehicles.

3 Data summarised

There was 33 incidents across the time period where a fire incident involved an electric vehicle, lithium battery or charging device. 93.9% of the 33 incidents were a primary fire classification.

Fire Classification	Total
Primary	31
Secondary	2
Total	33

45.5% (15) of the 33 incidents were identified as the reason/ motive being deliberate.

Reason/Motive	Total
Accidental	15
Deliberate - others property	11
Deliberate - own property	1
Deliberate - unknown owner	3
Not known	3
Total	33

15 incidents have been classified as having an unknown source of ignition. These incidents involved various items that were deliberately set on fire, making it difficult to determine exactly what started the fire.

Source of Ignition	Total
Electricity supply - Apparatus - batteries, generators	7
Electricity supply - Wiring, cabling, plugs	4
Industrial equipment - Other	1
Naked flame - Lighted paper or card, or other naked flame	2
Not known / other	15
Other domestic style appliance - Battery charger	1
Vehicles only - Electrical fault	2
Vehicles only - Unknown	1
Total	33

The highest total for the property type is 'other' with 12, this is an accumulation where the items were deliberately set on fire in such locations as a street, footpath, a playing field etc.

Property level 3	Property level 4	Total
Bicycle	Bicycle	2
Dwelling	Converted Flat/Maisonette - multiple occupancy	1
	House - single occupancy	7
	Licensed HMO	1
	Purpose Built Flat/Maisonette - multiple occupancy	1
Motorcycle	Motorcycle	1
Non Residential	Industrial Manufacturing	1
	Laboratory/research Establishment	1
	Private garage	1
	Private Garden Shed	3
	Retail	1
Other	Other	12
Other outdoors (including land)	Loose refuse (including in garden)	1
Total		33

Of the 33 cases, an electrical vehicle was involved in the fire in 75.8% (25) of them.

Item on fire	Total
Electric scooter	14
Electric bike	8
Lithium battery	6
Childs electric motorbike	1
E-bike charging adapter	1
Electric car	1
Golf buggy	1
Unknown	1
Total	33

4 Data

Incident Ref	Day	Month	Year	Time	Fire Classification	Reason/Motive	Property level 3	Property level 4	Source of Ignition	Injuries/ Were they rescued?	Item on fire
46011959	19	June	2018	16:49:47	Secondary	Accidental	Non Residential	Private Garden Shed	Not known	No - N/A	Electric bike
46014463	9	July	2018	06:40:52	Primary	Accidental	Dwelling	House - single occupancy	Electricity supply - Wiring, cabling, plugs	No - N/A	Golf buggy
46021002	18	September	2018	16:21:12	Primary	Deliberate - own property	Dwelling	House - single occupancy	Not known	No - N/A	Electric bike
46023858	20	October	2018	18:46:02	Primary	Accidental	Dwelling	House - single occupancy	Electricity supply - Apparatus - batteries, generators	No - N/A	Lithium battery
47004564	28	February	2019	11:39:43	Primary	Accidental	Non Residential	Laboratory/research Establishment	Electricity supply - Apparatus - batteries, generators	No - N/A	Lithium battery
48004341	26	February	2020	11:01:11	Primary	Accidental	Dwelling	House - single occupancy	Electricity supply - Wiring, cabling, plugs	No - N/A	E-bike charging adapter
48009151	20	April	2020	20:47:42	Primary	Accidental	Non Residential	Private garage	Electricity supply - Wiring, cabling, plugs	No - N/A	Childs electric motorbike
49004142	8	March	2021	19:39:34	Secondary	Deliberate - others property	Other outdoors (including land)	Loose refuse (including in garden)	Not known	No - N/A	unknown
49006797	3	April	2021	22:42:10	Primary	Deliberate - others property	Other		Naked flame - Lighted paper or card, or other naked flame	No - N/A	Electric scooter
50004006	13	February	2022	15:05:55	Primary	Accidental	Dwelling	House - single occupancy	Electricity supply - Apparatus - batteries, generators	No - N/A	Electric bike
50004814	23	February	2022	14:58:05	Primary	Accidental	Dwelling	House - single occupancy	Electricity supply - Apparatus - batteries, generators	No - N/A	Lithium battery

OFFICIAL

Incident Ref	Day	Month	Year	Time	Fire Classification	Reason/Motive	Property level 3	Property level 4	Source of Ignition	Injuries/ Were they rescued?	Item on fire
50007595	22	March	2022	18:44:49	Primary	Deliberate - unknown owner	Other		Not known	No - N/A	Electric scooter
50009916	13	April	2022	18:06:50	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter
50010906	20	April	2022	21:16:21	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter
50011047	21	April	2022	20:21:00	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric bike
50013024	9	May	2022	20:48:45	Primary	Accidental	Dwelling	Converted Flat/Maisonette - multiple occupancy	Electricity supply - Apparatus - batteries, generators	No - N/A	Electric scooter
50014174	20	May	2022	23:03:09	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter
50018880	4	July	2022	20:36:11	Primary	Deliberate - others property	Other		Naked flame - Lighted paper or card, or other naked flame	No - N/A	Lithium battery
50028307	5	September	2022	18:52:37	Primary	Accidental	Dwelling	Purpose Built Flat/Maisonette - multiple occupancy	Electricity supply - Apparatus - batteries, generators	No - N/A	Lithium battery
50030522	28	September	2022	14:49:28	Primary	Accidental	Dwelling	House - single occupancy	Other domestic style appliance - Battery charger	No - N/A	Electric bike
50030845	2	October	2022	18:20:52	Primary	Deliberate - unknown owner	Bicycle		Vehicles only - Unknown	No - N/A	Electric scooter
50033074	26	October	2022	04:48:12	Primary	Deliberate - others property	Motorcycle		Not known	No - N/A	Electric scooter
50034674	7	November	2022	20:43:53	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter

OFFICIAL

Incident Ref	Day	Month	Year	Time	Fire Classification	Reason/Motive	Property level 3	Property level 4	Source of Ignition	Injuries / Were they rescued?	Item on fire
50036101	23	November	2022	19:28:29	Primary	Not known	Other		Not known	No - N/A	Electric scooter
50036467	28	November	2022	10:43:13	Primary	Accidental	Non Residential	Retail	Vehicles only - Electrical fault	No - N/A	Electric scooter
51000574	8	January	2023	20:46:13	Primary	Accidental	Non Residential	Private Garden Shed	Vehicles only - Electrical fault	No - N/A	Electric bike
51011034	13	May	2023	03:20:59	Primary	Not known	Non Residential	Private Garden Shed	Not known	No - N/A	Electric car
51014028	10	June	2023	18:22:32	Primary	Deliberate - unknown owner	Other		Electricity supply - Wiring, cabling, plugs	No - N/A	Electric scooter
51015457	21	June	2023	13:03:50	Primary	Not known	Non Residential	Industrial Manufacturing	Industrial equipment - Other	No - N/A	Lithium battery
51017415	11	July	2023	13:20:39	Primary	Accidental	Dwelling	Licensed HMO	Electricity supply - Apparatus - batteries, generators	Yes	Electric bike
51023599	12	September	2023	13:54:47	Primary	Accidental	Bicycle		Other	No - N/A	Electric bike
51028255	31	October	2023	13:39:47	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter
51009426	24	April	2023	20:00:44	Primary	Deliberate - others property	Other		Not known	No - N/A	Electric scooter