



Data Analysis Report

Summary of July and August 2022 references the Heatwave period

About

This provides analysis and summary of July and the date range 1- 20August 2022. This period experienced a nationwide heatwave and an increase in incidents was noted across the Service. This review has been conducted by the Performance and Analytics department, Essex County Fire and Rescue Service.

This document should be used as a reference should the analysis be employed for further work within Essex Fire



Background

During July and August 2022, a nationwide heatwave was declared. It was noted by the Service that there appeared to be a high number of fires being attended and so an information paper was submitted, reviewing an initial period of 16 to 24 July 2022. That paper concluded that there was a higher-than-normal number of fires across Essex within that period, and there was a strong possibility that the high temperatures and dry conditions contributed to the number of fires. The trend appeared to continue into August, and this paper will provide an overview of the extended date period.

Data used

Data was extracted on the 22/08/2022 at 08:45am. At the time of extraction, 97% of the incidents for July 2022 and 68% of the incidents for August 2022 had been quality assured. This data may therefore change if refreshed.

For the purposes of the review, the incidents which have not been quality assured will also be included.

Data was extracted from the NeRF* database using view vw_01_incidents and viw_02_ for all incidents between '2018-07-01 and '2022-08-20'

Findings

The UK experienced a brief but unprecedented extreme heatwave from 16 to 19 July 2022¹, with knock on effects of the high temperatures continuing into the following weekend.

A second heatwave began on 9 August. An amber extreme heat weather warning for most of England and Wales was put in place, as well as a level 3 heat health alert for central and southern England and a level 2 alert for northern England.

In August, Tom Morgan, a Met Office meteorologist, said that "temperatures will not go as high as they did during July" but will last over "a prolonged period" with "temperatures in the low-30s" On 8 August the [UK Health Security Agency](#) issued a level 3 heat health alert for central and southern England effective from 9 to 13 August, which was later extended to 14 August ²

¹ https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2022/2022_03_july_heatwave.pdf

² [2022 United Kingdom heatwaves - Wikipedia](#)

The following dates have been used to compare this period to the same period over 5 years. This provides more contextual analysis of this period to identify any trends.

Comparable dates over past 5 years

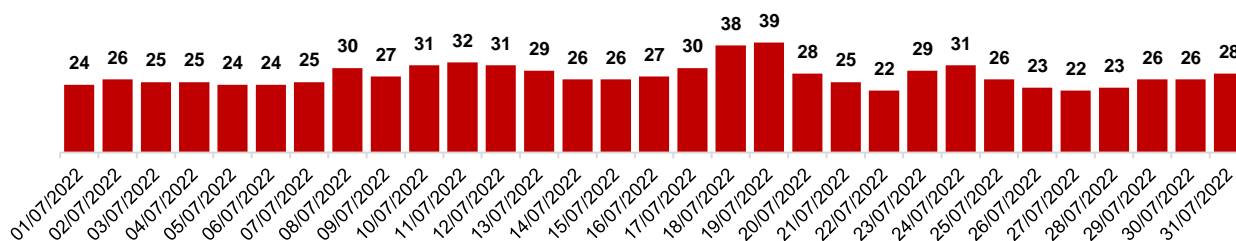
	2018	2019	2020	2021	2022
July	29/06/2018	05/07/2019	03/07/2020	02/07/2021	01/07/2022
	29/07/2018	04/08/2019	02/08/2020	01/08/2021	31/07/2022

	2018	2019	2020	2021	2022
August	30/07/2018	05/08/2019	03/08/2020	02/08/2021	01/08/2022
	18/08/2018	24/08/2019	22/08/2020	21/08/2021	20/08/2022

Temperatures³

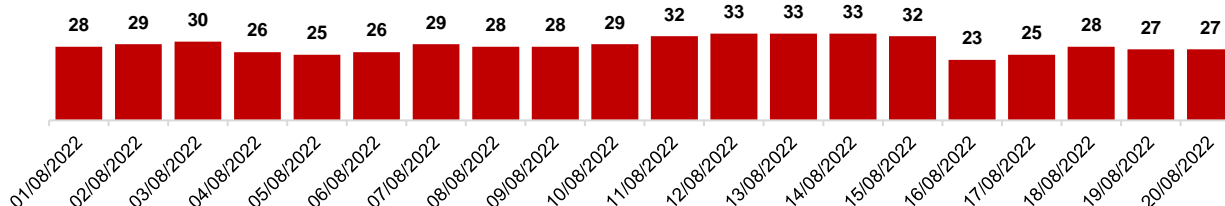
As mentioned, both July and August experienced high temperatures, with the UK Security Agency issuing extreme heat weather warnings. The following maximum daily temperatures for Chelmsford have been extracted. As shown, the maximum daily temperature begins to increase on 16 July, with the highest temperature of the month seen on 19 July. This links to the declaration of the July heatwave dates.

Max Temperatures per Day °C - Chelmsford July 2022



In line with what was said by the Met Office above², the maximum temperatures per day in August were in the high 20s/low 30s, and the temperature can be seen to increase during the extreme heat weather warning between the 9th and 14th August.

Max Temperatures per Day °C - Chelmsford August 2022

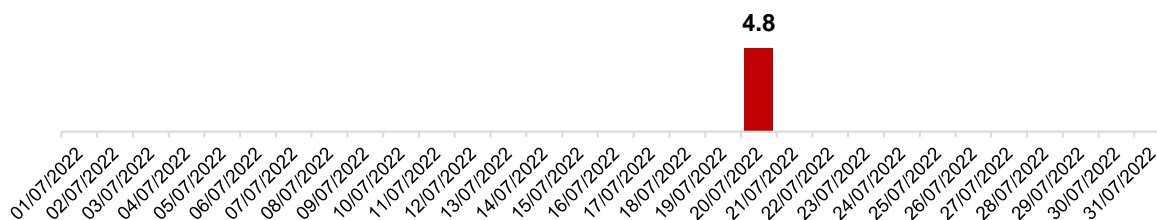


³ <https://www.chelmerivillage-weather.co.uk/wxhistory.php?date=202208>

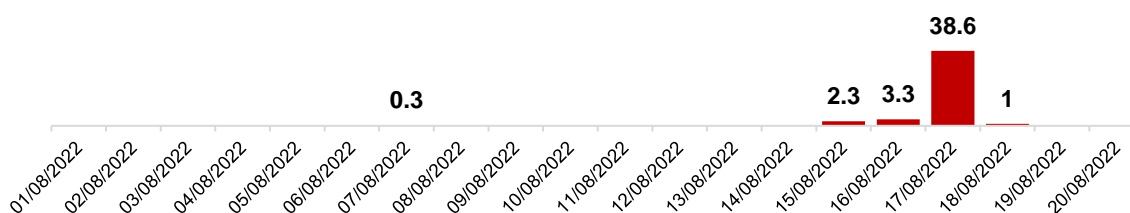
Rainfall⁴

Rainfall during July and August was exceptionally low, with only one day recording rainfall in Chelmsford during July. August experienced one day of very heavy rainfall on 17 August leading to flooding⁵.

Rainfall Per Day mm - Chelmsford July 2022



Rainfall Per Day mm - Chelmsford August 2022



Highlights

- 14 August has the highest number of fire related incidents recorded per day since 1 January 2016, with positions 2 and 3 taken by 18 and 19 July 2022.
- The first and second highest days were linked to Storm Eunice and Storm Doris. Positions 6-9 in the top 10 were taken by days in August meaning that 6 of the top 10 rankings are all accounted for by days in August or July
- July 2022 was the highest ever month recorded since 1 January 2016 in terms of the total number of incidents per month, with August ranking fourth
- July saw a total of 3,488 pump mobilisations, an increase of 36% compared to the five-year average. There was a total of 2,367 pump mobilisations in August, up to 20 August 2022, 41% higher than the comparable five-year average
- 9 out of 10 top pump mobilisations per day since 1 January 2017 have occurred in either July or August 2022, mobilisation data only available from 2017
- Over the period of 1 hour on 19 July, 34 pumps were deployed at scene, accounting for 57% of the available pumps on the run at that time, responding to 24 ongoing incidents

⁴ <https://www.chelmerivillage-weather.co.uk/wxhistory.php?date=202208>

⁵ [Essex flooding: Flooding hits Essex as roads shut and cars submerged across county - Essex Live](#)

- On the 13 August, during 18:15 and 18:30, 36 Pumps were shown as attending incidents, accounting for 5% of the available pumps at that time, responding to 12 ongoing incidents
- The Control Room received 5,792 calls during July, 47% more than the five-year average. 19 July saw the third highest number of calls received per day since 1 January 2017.

Total Incidents

The table below provides a total count of incidents recorded in IRS for each month over the past 5 years. July 2022 has a much higher number of incidents than in any other month, 13% higher than the next highest month July 2018.

July/August 2018 were also months in which a heatwave was declared⁶ by the Met Office. The initial conclusion is that the 2018 heatwave, and the heatwave this year have been significant factors contributing to the high number of incidents.

Month	2018	2019	2020	2021	2022
Jan	1,187	1,059	1,072	1,071	1,138
Feb	1,056	1,038	1,069	899	1,342
Mar	1,222	1,181	1,123	1,090	1,239
Apr	1,123	1,338	1,158	1,360	1,386
May	1,293	1,284	1,306	1,233	1,326
Jun	1,458	1,251	1,351	1,326	1,410
Jul	2,057	1,515	1,356	1,399	2,325
Aug	1,407	1,612	1,537	1,275	1,724
Sep	1,309	1,455	1,316	1,344	-
Oct	1,246	1,211	1,157	1,354	-
Nov	1,200	1,208	1,047	1,298	-
Dec	1,145	1,107	1,052	1,121	-

In terms of total incidents recorded in IRS since January 2016, July ranks number 1, with August 2022 currently at position 4. At the time of this report, there is still over a week left in August to be integrated, so August 2022 may well climb in the rankings.

Rank	Month	Total Incidents
1	Jul_2022	2,325
2	Jul_2018	2,057
3	Aug_2016	1,744
4	Aug_2022	1,724
5	Aug_2019	1,612
6	Jul_2017	1,579
7	Sep_2016	1,562
8	Aug_2020	1,537
9	Jul_2019	1,515
10	Jun_2017	1,512

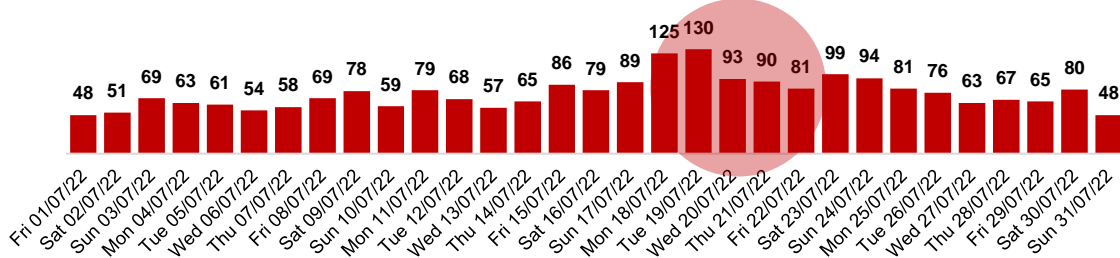
⁶ [2018 British Isles heat wave - Wikipedia](#)

During July 2022 there was a total of **2,325** incidents reported, **34%** higher than the five-year average of **1,730** incidents, suggesting that July 2022 has reported higher numbers of incidents than in previous years.

	2018	2019	2020	2021	2021	5 yr. Avg
Total Incidents	2,057	1,515	1,356	1,399	2,325	1,730
% Difference from 5 yr. Avg	19%	-12%	-22%	-19%	34%	-

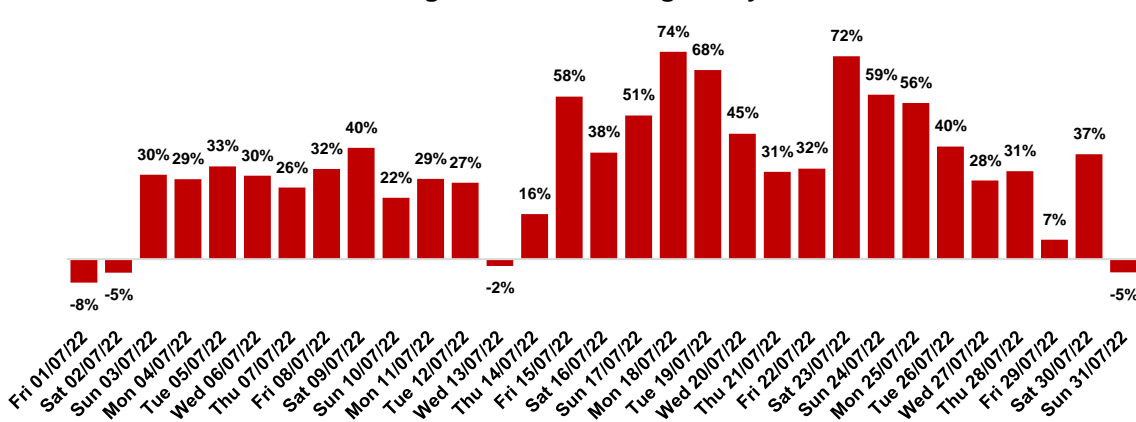
The total incidents per day peaked on 19 July 2022, with a total of **121** incidents recorded, ahead of the five-year daily average for July of **55** incidents. As can be seen, the majority of the daily incidents are above the five-year daily average. The peak in the number of incidents correspond to the heatwave dates as noted above and are circled below.

Incident per Day Count - July 2022



As shown by the chart below, nearly all days in July 2022 experienced a higher number of incidents per day than the five-year average. The 18/19/23/24 July in particular saw higher comparable incidents

% Change vs 5 Year Average- July 2022

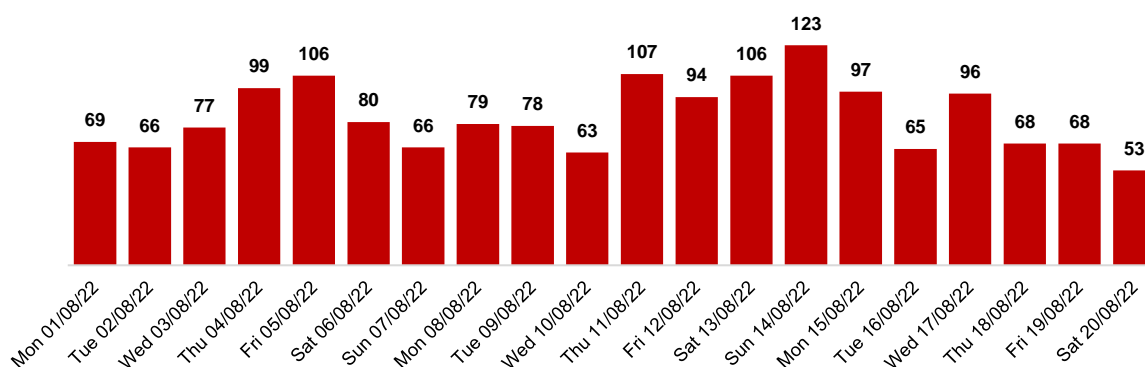


From the start of August and up to and including 20 August, there was a total of **1,660** incidents reported, **53%** higher than the five-year average of **1,085** incidents at the same point in time, suggesting that August 2022 has also reported higher numbers of incidents than in previous years.

	2018	2019	2020	2021	2021	5 yr. Avg
Total Incidents	909	969	1,082	804	1,660	1,085
% Difference from 5 yr. Avg	-16%	-11%	0%	-26%	53%	-

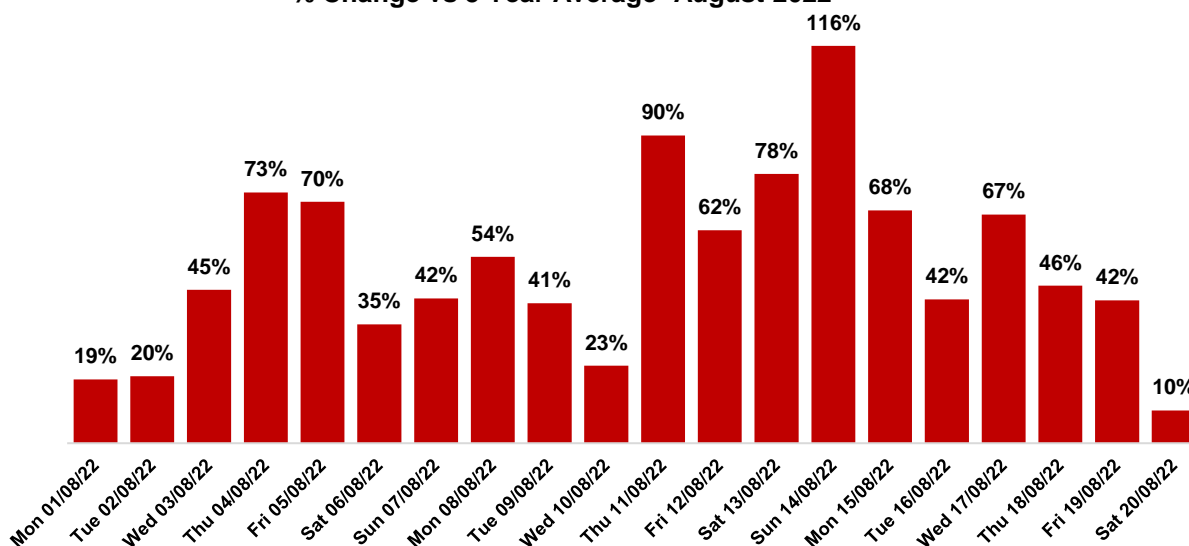
Breaking the month into days, it can be seen that 14 August experienced the highest number of incidents per day, with **123** reported incidents.

Incident per Day Count - August 2022



Further, looking at the difference per day in August 2022, every day is tracking higher than the daily 5-year average with the 14 August **more than double** the five-year average.

% Change vs 5 Year Average- August 2022



As noted, in terms of the Top 10 highest number of total incidents per day, **6 are dates within July and August 2022.**

- **19 July ranks at number 3** with 130 incidents
- **18 July ranks at number 5** with 125 incidents
- **14 August ranks at number 6**
- the following 3 ranks are also claimed by days in August.

The top 2 days occurred during two significant storms which hit the UK. The days recording the highest number of incidents appear to be linked to extreme weather occurrences. It is not possible to fully conclude that the higher temperatures and extreme weather contributed to the higher number of incidents, although it is a strong possibility.

Top 10 Total Incidents per Day

Rank	Date	# Incidents	Event
1	18/02/22	273	Storm Eunice
2	23/02/17	137	Storm Doris
3	19/07/22	130	2022 Heatwave
4	23/06/16	126	Flooding
5	18/07/22	125	2022 Heatwave
6	14/08/22	123	2022 Extreme Temp
7	11/08/22	107	2022 Extreme Temp
8	05/08/22	106	2022 Extreme Temp
9	13/08/22	106	2022 Extreme Temp
10	18/01/18	100	High Wind/snowstorms

Fire incidents

There were **1,463** Fire related incidents in July and **1,135** in the August date range specified. Comparing to the five-year average, July had **53%** more fires than average, and August 2022 saw an upsurge of **82%**.

July						
	2018	2019	2020	2021	2022	5 yr. Avg
Fire Incidents	1,276	798	719	516	1,463	954
% Difference from 5 yr. Avg	34%	-16%	-25%	-46%	53%	-

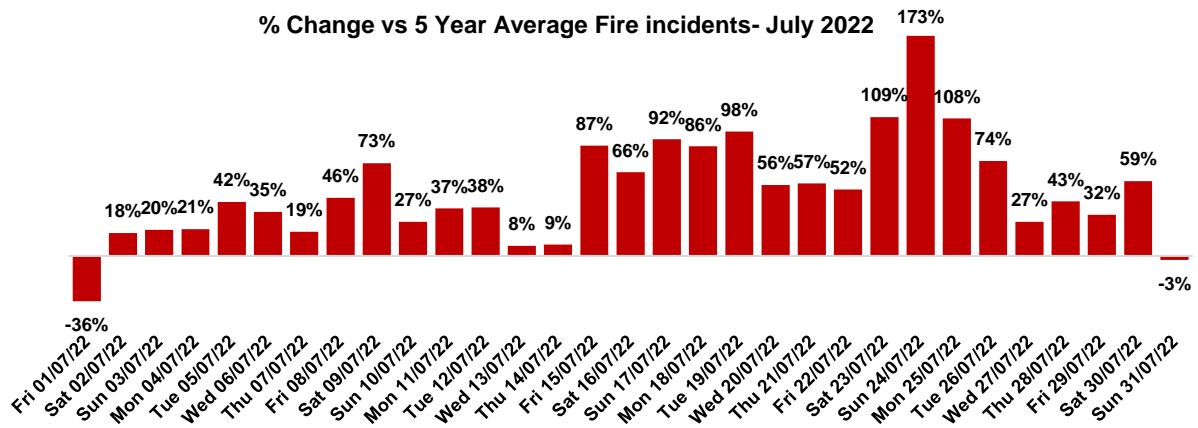
August (1 st - 20 th August 2022)						
	2018	2019	2020	2021	2022	5 yr. Avg
Fire Incidents	514	518	589	359	1,135	623
% Difference from 5 yr. Avg	-17%	-17%	-5%	-42%	82%	-

Reviewing the Top 10 in terms of fire related incidents per month, **July holds the highest number of fire related incidents** since January 2016. **August currently ranks at number 3**, with 11 days of the month remaining from the date of this report, so may rank higher by the end of the month.

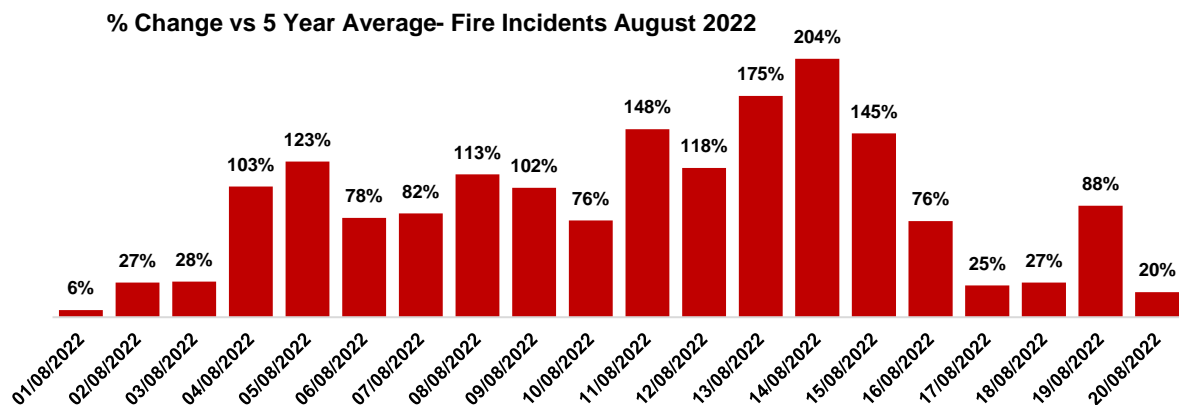
Rank	Month	Total Incidents
1	Jul_2022	1,463
2	Jul_2018	1,276
3	Aug_2022	1,135
4	Aug_2016	1,005
5	Apr_2017	836
6	Sep_2016	828
7	Aug_2019	812
8	Jul_2019	798
9	Aug_2018	767
10	Jul_2017	762

The following charts display the number of fire incidents per day through July and August, compared to the % change vs the five-year average per day.

As shown in the tables above, **July saw 53%** more fire incidents than the five-year average with August tracking **82%** higher. As can be seen in the July chart, most days saw an uplift compared to the five-year year average, with the larger increases seen from 15 July onwards, reflecting the heatwave period. The day with the largest number of fire incidents compared to the five-year average is **Sunday 24 July**



From the start of August up to and including 20 August, every day saw an increase vs the five-year average. Sunday 14 August saw the highest increase, **3 times** the **five-year** average, reporting 107 fires versus an average of 35. This will be reflected in the ranking tables on the page below.

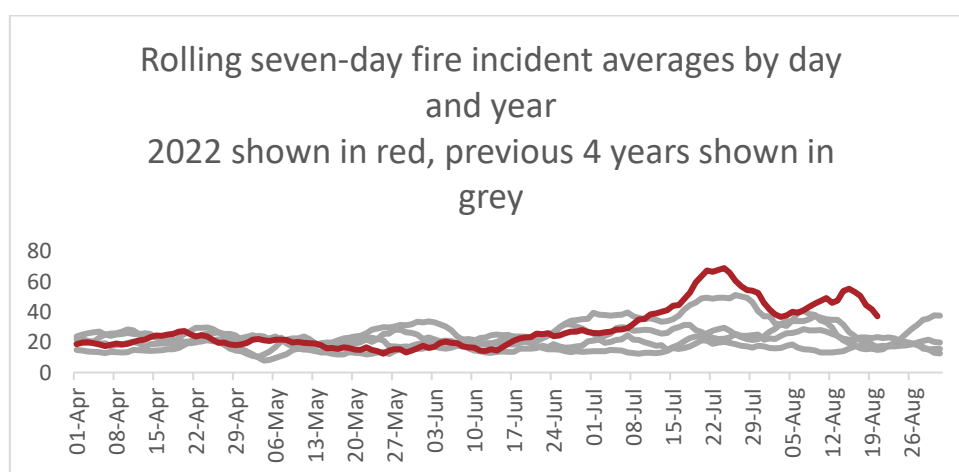


The following table ranks the days with the highest number of fires recorded in IRS since 1 January 2016.

The **day with the highest number of fires is 14 August 2022** with 107 Fires recorded. This links into the previous discussion around the fact that August 2022 saw an 82% increase in the number of fires the five-year average, and a 204% increase on the five-year average for number of fires on the same day. **Two of the heatwave days in July feature in ranks 2 and 3.**

Rank	Date	# Incidents	Event
1	14/08/22	107	2022 Extreme Temp
2	19/07/22	89	2022 Heatwave
3	18/07/22	80	2022 Heatwave
4	11/08/22	79	2022 Extreme Temp
5	05/08/22	78	2022 Extreme Temp
6	13/08/22	78	2022 Extreme Temp
7	15/08/22	73	2022 Extreme Temp
8	24/07/22	71	2022 Extreme Temp
9	05/11/16	70	Fireworks Night
10	04/08/22	65	2022 Extreme Temp

Using a rolling 7-day average of fire incidents, to smooth out potential days where there are increased numbers of fires, the numbers of fires peak on the 22 and 25 of July where the heatwave incidents are influencing the average. This further goes to show that this period experienced more fires than in previous years.



Fires as a % of all incidents

Fires accounted for **63%** of all incidents during July and **66%** in August (up to 20 August). Both July and August appear to experience higher than average fires compared to the five-year averages.

	2022	2021	2020	2019	2018	5 Yr Avg	% Dif
Jan	36%	28%	37%	39%	36%	35%	3%
Feb	30%	36%	33%	43%	40%	37%	18%
Mar	40%	44%	47%	42%	38%	42%	-5%
Apr	46%	52%	55%	50%	41%	49%	-5%
May	40%	42%	55%	50%	45%	46%	13%
Jun	46%	42%	52%	42%	51%	47%	-1%
Jul	63%	37%	53%	53%	62%	54%	18%
Aug	66%	41%	48%	50%	55%	52%	27%
Sep	-	41%	48%	49%	47%	46%	-
Oct	-	31%	33%	35%	41%	35%	-
Nov	-	35%	40%	40%	42%	39%	-
Dec	-	29%	33%	35%	33%	33%	-

July and August are similar in terms of the incident type split. Fires are the most common incident in both months sharing 63% and 66% of all incidents, respectively. On average over a five-year period, fires account for 44% of incidents, Special services 26% and False alarms 30%. July and August have both seen an increase in the number of fires compared to the average, as discussed earlier (+53% and +82%). This could be linked to the increased temperatures during these months and the low rainfall.

% of Incident Type per Month

	Fire	Special Service	False Alarm
July	63%	21%	16%
August	66%	19%	15%

Fire Type

Over a five-year period, outdoor fires average around **55%** of all fires. Looking at the table below, 2022 has seen **63%** of all fires reported at outdoor fires, slightly higher than the average for the previous years. Linking this in with the higher temperatures this year, would suggest that there is a link between the temperature and increase in fires and outdoor fires.

There does appear to be an increase in outdoor fires during July and August in each year, where there are warmer and dryer conditions. July 2018 and July 2022 in particular show there was a greater proportion of outdoor fires. As previous discussed, both these months contained designated heatwave periods, further suggesting that associated environmental factors linked to the heatwave have contributed to the increase in fires experienced in these months.

August 2022 does not seem to be showing a greater percentage of outdoor fires than the average, however, while the proportion of outdoor fires may be in line with the average, the actual number of fires has been greater.

Outdoor Fires as a % of all Fires

	2018	2019	2020	2021	2022
Year Average	54%	55%	55%	50%	63%
July	78%	67%	69%	47%	79%
August	70%	46%	69%	63%	65%

Incident Volume and Utilisation

The chart below shows the breakdown per hour of concurrent incidents, i.e., the number of ongoing incidents attended by ECFRS at each hour for July. As can be seen by the red shading, the middle part of the month, saw higher numbers of concurrent incidents. Tuesday 19 July experienced the highest number of concurrent incidents of the month with 23 ongoing incidents between 14:00-16:00.

At the height of this period at 15:45, 34 pumps were attending incidents, representing 57% of all available pumps on the run at that point.

		11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Fri	01/07/2022	3	4	3	3	7	8	7	3	4	3	3	3	3
Sat	02/07/2022	2	5	1	5	12	7	5	3	2	4	7	4	1
Sun	03/07/2022	9	7	5	1	6	9	5	5	9	11	4	4	2
Mon	04/07/2022	5	4	4	7	4	4	11	10	10	7	4	4	5
Tue	05/07/2022	2	5	4	4	7	5	7	5	7	8	4	3	0
Wed	06/07/2022	3	4	9	6	9	3	4	4	5	5	6	1	4
Thu	07/07/2022	5	7	3	4	4	4	10	11	6	4	6	5	5
Fri	08/07/2022	4	3	3	4	5	8	5	6	14	7	3	8	7
Sat	09/07/2022	2	5	10	12	7	16	14	10	10	9	5	6	6
Sun	10/07/2022	1	3	8	8	11	8	7	9	10	5	5	4	5
Mon	11/07/2022	6	8	9	9	10	9	8	8	12	10	6	6	3
Tue	12/07/2022	5	6	7	9	7	6	7	7	6	5	8	4	5
Wed	13/07/2022	5	6	5	7	3	8	9	10	10	3	6	5	4
Thu	14/07/2022	5	8	5	4	2	7	9	9	6	7	8	2	4
Fri	15/07/2022	7	5	6	6	8	6	5	8	9	8	10	6	3
Sat	16/07/2022	12	13	5	10	5	10	14	8	7	10	8	6	5
Sun	17/07/2022	6	10	14	9	13	8	10	9	9	9	6	5	6
Mon	18/07/2022	8	12	11	14	13	16	13	18	21	8	8	13	6
Tue	19/07/2022	10	20	22	23	23	21	16	17	16	13	9	8	5
Wed	20/07/2022	10	6	11	9	8	8	12	10	8	12	11	5	4
Thu	21/07/2022	2	4	9	10	14	11	8	13	12	4	5	6	3
Fri	22/07/2022	6	4	8	7	10	6	10	13	5	5	5	8	3
Sat	23/07/2022	6	6	10	10	12	10	11	7	10	9	7	8	11
Sun	24/07/2022	7	10	11	10	8	9	13	9	12	8	8	10	7
Mon	25/07/2022	4	7	6	5	12	7	8	10	6	14	5	7	2
Tue	26/07/2022	3	6	9	6	7	8	6	6	7	7	7	8	3
Wed	27/07/2022	7	5	2	7	6	6	3	8	7	7	10	6	0
Thu	28/07/2022	2	1	4	3	6	7	7	13	8	6	5	6	6
Fri	29/07/2022	6	10	12	8	6	5	7	4	6	7	8	3	4
Sat	30/07/2022	4	3	4	6	11	9	8	6	9	12	11	4	6
Sun	31/07/2022	3	4	3	2	1	3	5	5	4	6	3	2	1

During August, the concurrent incident count matches the previous discussions regarding the busiest times in this month. The day with the most ongoing incidents at one point **was Wednesday 17 August**, with **20** ongoing incidents at 18:00. More specifically, and referring to the earlier charts regarding rainfall, this was a period of extremely high rainfall in a very short period of time, leading to high levels of flooding and automated alarm calls.

Referring back to the incident counts per day for August and the percentage change to the five-year average, the period 11 to 15 August has been identified as being unusually busy in terms of both total incidents and fire incidents. This too is reflected in the table below, highlighting the numbers of concurrent incidents ongoing during the time period. This further suggests that many of the incidents were more protracted, leading to appliances spending longer at scene.

The second highest day in terms of concurrent incidents is **Sunday 14 August**, with **18** ongoing incidents at 21:00 hours. Previous discussions have highlighted that this was the busiest ever day to date in terms of fire incidents.

		11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Mon	01/08/2022	6	11	3	9	6	5	6	8	4	8	8	5	3
Tue	02/08/2022	2	4	9	7	5	7	6	6	6	10	6	5	2
Wed	03/08/2022	7	6	8	6	10	15	8	8	8	4	8	7	5
Thu	04/08/2022	7	6	11	13	8	11	13	10	8	7	11	8	7
Fri	05/08/2022	5	9	11	7	11	10	13	14	14	6	9	7	7
Sat	06/08/2022	6	8	8	12	11	13	13	12	13	10	10	12	10
Sun	07/08/2022	6	5	3	5	5	5	7	6	4	10	10	6	4
Mon	08/08/2022	7	7	8	6	12	10	6	4	7	6	8	7	3
Tue	09/08/2022	7	8	4	4	8	9	13	13	9	7	12	6	2
Wed	10/08/2022	4	2	7	7	8	13	11	9	4	3	2	1	2
Thu	11/08/2022	11	9	8	8	17	14	15	17	17	14	15	3	1
Fri	12/08/2022	9	7	6	8	12	11	9	9	16	13	11	3	5
Sat	13/08/2022	6	8	8	15	10	12	14	12	13	11	16	13	1
Sun	14/08/2022	11	10	8	9	12	12	10	14	11	15	18	10	3
Mon	15/08/2022	12	8	7	12	13	12	10	11	8	8	6	3	1
Tue	16/08/2022	4	3	7	6	5	4	4	4	8	6	5	6	5
Wed	17/08/2022	5	4	4	3	7	15	17	20	13	10	7	2	3
Thu	18/08/2022	7	3	5	6	4	3	6	6	6	6	6	5	0
Fri	19/08/2022	1	4	2	7	9	11	14	5	5	4	4	2	6
Sat	20/08/2022	2	2	2	4	4	5	2	4	6	7	7	0	1
Sun	21/08/2022	5	5	4	1	2	2	9	8	4	4	6	5	3

Pump Utilisation

Over the course of the two heatwave days, 18/19 July, resources were seeing higher rates of utilisation. During the busiest periods as highlighted above, around 50% of all available pumps on the run were deployed at scene and not available to provide cover at that given point.

At scene has been defined as *an appliance showing a status of 'Available at Incident, Closed Down, In Attendance, Ordered to Incident, Proceeding to Incident, Radio Ordered to Incident.'*

The charts below show the percentage of available pumps on the run at scene for every 15-minute interval over these two days. Comparing this to the number of concurrent incidents above, it reflects that the more intense periods of incidents started earlier in the day on 19 July than the previous day.

At the most intensive point, nearly **60%** of available pumps were at scene out of all the available pumps. Compared to the same days last year, the highest percentage of pump utilisation was **15%**, which shows how extraordinary the heatwave period was in terms of incident attendance.

18 th July 2022					19 th July 2022				
Hour	Minutes				Hour	Minutes			
	0	15	30	45		0	15	30	45
00	9%	13%	9%	5%	00	7%	3%	3%	3%
01	4%	2%	2%	2%	01	5%	3%	10%	20%
02	2%	2%	2%	7%	02	21%	18%	13%	8%
03	4%	4%	11%	6%	03	8%	7%	7%	11%
04	6%	6%	2%	4%	04	10%	3%	8%	3%
05	2%	4%	0%	2%	05	3%	3%	3%	3%
06	0%	2%	0%	0%	06	7%	7%	9%	7%
07	0%	6%	10%	4%	07	7%	9%	7%	11%
08	6%	6%	2%	4%	08	6%	9%	6%	6%
09	6%	6%	8%	13%	09	6%	8%	6%	18%
10	12%	4%	6%	4%	10	13%	9%	21%	20%
11	6%	9%	5%	6%	11	25%	22%	26%	26%
12	9%	13%	25%	27%	12	32%	33%	31%	47%
13	19%	18%	25%	18%	13	45%	45%	43%	40%
14	22%	24%	20%	22%	14	49%	43%	36%	38%
15	29%	26%	37%	31%	15	42%	44%	55%	57%
16	36%	46%	45%	49%	16	51%	43%	35%	31%
17	54%	48%	54%	53%	17	23%	11%	14%	15%
18	48%	43%	45%	49%	18	17%	20%	22%	20%
19	46%	49%	37%	34%	19	23%	19%	16%	7%
20	21%	18%	33%	10%	20	11%	10%	16%	16%
21	19%	8%	7%	7%	21	16%	13%	11%	11%
22	13%	23%	13%	13%	22	14%	22%	22%	20%
23	15%	13%	10%	8%	23	17%	14%	16%	16%

13 August 2022 went through a very intensive period around 16:00 – 20:00, with **75%** of available pumps (36) attending an incident at 18:15-18:30.

Looking at the 14 August, the period where the largest number of mobilised pumps occurred was at 13:30, with **40%** of available pumps on the run attending an incident.

While the numbers of concurrent incidents are not at their highest at this point, it suggests that while the numbers of incidents were high, they were shorter in duration and not requiring as many pumps in attendance.

13 th August 2022					14 th August 2022				
Hour	Minutes				Hour	Minutes			
	0	15	30	45		0	15	30	45
00	10%	20%	18%	14%	00	8%	6%	6%	6%
01	12%	4%	4%	4%	01	6%	8%	12%	14%
02	4%	4%	2%	2%	02	15%	19%	23%	17%
03	2%	2%	2%	2%	03	10%	10%	10%	8%
04	2%	6%	8%	6%	04	8%	10%	12%	14%
05	8%	4%	2%	2%	05	14%	10%	16%	16%
06	6%	4%	4%	4%	06	18%	13%	15%	15%
07	4%	4%	4%	4%	07	13%	15%	13%	13%
08	2%	0%	0%	2%	08	21%	19%	13%	15%
09	11%	11%	16%	7%	09	13%	21%	4%	11%
10	14%	11%	16%	10%	10	11%	9%	6%	8%
11	12%	14%	9%	2%	11	13%	15%	20%	32%
12	6%	22%	27%	31%	12	22%	22%	30%	34%
13	23%	28%	35%	38%	13	32%	39%	40%	35%
14	32%	38%	45%	51%	14	27%	29%	26%	26%
15	54%	46%	41%	52%	15	33%	34%	34%	30%
16	49%	48%	52%	51%	16	30%	34%	25%	18%
17	50%	43%	48%	57%	17	17%	13%	15%	20%
18	60%	69%	75%	73%	18	22%	25%	20%	15%
19	68%	61%	63%	56%	19	13%	12%	8%	11%
20	52%	44%	45%	37%	20	13%	11%	15%	13%
21	31%	33%	29%	37%	21	11%	16%	7%	15%
22	32%	27%	22%	14%	22	20%	19%	7%	4%
23	10%	11%	11%	11%	23	4%	4%	6%	7%

Availability and Station Coverage

One of the most important aspects of high pump utilisation is that station coverage is maintained to satisfactory levels by the remaining appliances.

Throughout July coverage across all stations averaged at **77%**, and across the strategic stations, coverage averaged at **93%**. The chart below provides the coverage percentage for each joint station per day. The joint stations highlighted in red are strategic stations. Due to the size of the chart, it has been split into two. The first chart showing 1-16 July, and the second showing 17 July onwards.

	01-Jul	02-Jul	03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
Colchester	99%	99%	94%	92%	91%	100%	94%	100%	96%	87%	98%	96%	93%	91%	98%	89%
Dovercourt	99%	100%	96%	100%	100%	96%	97%	98%	96%	95%	100%	92%	98%	93%	97%	99%
Clacton & Weeley	95%	98%	99%	91%	100%	100%	90%	97%	94%	93%	100%	99%	99%	99%	98%	96%
Manningtree	56%	30%	0%	35%	49%	83%	76%	62%	92%	100%	0%	61%	79%	84%	25%	25%
Frinton	53%	34%	13%	35%	68%	81%	59%	39%	0%	30%	64%	70%	77%	74%	64%	70%
Brightlingsea	95%	48%	98%	89%	100%	100%	64%	71%	22%	64%	33%	49%	83%	100%	73%	36%
Wivenhoe	34%	100%	75%	74%	96%	100%	97%	99%	75%	78%	93%	79%	100%	98%	82%	62%
West Mersea	42%	61%	76%	100%	100%	94%	100%	98%	93%	77%	96%	100%	100%	100%	100%	78%
Tiptree	96%	95%	98%	80%	50%	99%	58%	38%	16%	79%	74%	70%	97%	79%	47%	44%
Coggeshall	25%	5%	45%	43%	48%	50%	53%	56%	50%	77%	45%	80%	77%	91%	52%	90%
Witham	98%	97%	100%	95%	100%	100%	100%	96%	96%	88%	84%	95%	99%	95%	94%	100%
Southend	98%	100%	98%	97%	97%	91%	97%	98%	97%	95%	100%	98%	97%	94%	98%	94%
Leigh	95%	96%	88%	93%	87%	97%	98%	96%	90%	96%	94%	93%	95%	97%	92%	91%
South Woodham	73%	72%	100%	89%	92%	82%	77%	48%	31%	56%	79%	84%	92%	76%	51%	79%
Great Baddow	46%	42%	25%	28%	67%	50%	53%	63%	63%	89%	16%	28%	69%	35%	25%	0%
Chelmsford	99%	97%	99%	97%	100%	98%	97%	94%	94%	97%	85%	92%	93%	98%	92%	86%
Rayleigh Weir & Hawkwell	100%	95%	99%	99%	95%	100%	99%	100%	82%	100%	98%	100%	100%	100%	98%	96%
Shoeburyness	100%	92%	99%	93%	88%	90%	80%	75%	32%	77%	63%	100%	99%	96%	97%	58%
Burnham & Tilligham	100%	93%	88%	99%	100%	100%	99%	87%	88%	100%	99%	98%	98%	100%	84%	100%
Tollesbury	0%	9%	23%	80%	81%	84%	48%	41%	7%	41%	67%	92%	84%	54%	36%	71%
Maldon	99%	93%	98%	98%	99%	100%	99%	96%	98%	89%	95%	98%	99%	94%	73%	85%
Rochford	99%	82%	89%	45%	98%	44%	46%	66%	71%	66%	80%	80%	71%	95%	100%	72%
Grays	91%	100%	99%	89%	99%	99%	97%	95%	91%	97%	92%	99%	100%	95%	88%	100%
Brentwood & Ingatestone	98%	97%	98%	98%	77%	93%	92%	88%	86%	94%	94%	95%	88%	94%	90%	84%
Basilston	98%	98%	100%	94%	98%	90%	93%	94%	91%	97%	93%	92%	100%	98%	97%	90%
Canvey	100%	91%	96%	97%	98%	97%	97%	66%	19%	88%	99%	99%	96%	100%	98%	99%
Orsett	91%	99%	88%	90%	95%	91%	95%	84%	86%	89%	84%	80%	84%	91%	95%	83%
Corringham	88%	87%	80%	97%	92%	90%	96%	83%	68%	79%	84%	96%	89%	99%	85%	92%
Billericay	29%	0%	0%	9%	51%	51%	24%	0%	5%	17%	60%	47%	42%	30%	0%	21%
Wickford	96%	96%	71%	81%	87%	77%	90%	99%	81%	91%	76%	71%	90%	95%	97%	57%
Harlow Central	99%	97%	94%	97%	98%	96%	95%	95%	90%	92%	94%	94%	94%	96%	98%	91%
Ongar	0%	0%	5%	12%	15%	53%	11%	0%	0%	0%	18%	24%	22%	64%	33%	0%
Loughton & Waltham Abbey	98%	99%	98%	94%	100%	87%	97%	99%	92%	97%	100%	98%	96%	94%	97%	88%
Braintree	100%	100%	100%	97%	94%	97%	87%	90%	63%	85%	87%	94%	96%	93%	92%	87%
Wethersfield	86%	100%	66%	98%	68%	98%	75%	79%	53%	70%	47%	89%	53%	100%	68%	0%
Sible Hedingham & Halstead	99%	97%	100%	99%	96%	89%	97%	97%	88%	97%	93%	99%	94%	97%	94%	88%
Old Harlow	55%	38%	83%	48%	47%	48%	81%	30%	34%	58%	40%	37%	40%	19%	28%	0%
Stansted & Dunmow	100%	98%	100%	98%	95%	98%	100%	100%	99%	87%	63%	99%	98%	100%	100%	95%
Newport	100%	100%	84%	100%	100%	98%	97%	70%	92%	52%	77%	100%	100%	100%	80%	84%
Saffron Walden	100%	100%	100%	100%	100%	98%	96%	100%	99%	95%	89%	99%	100%	100%	99%	98%
Thaxted	0%	0%	21%	35%	9%	42%	59%	56%	86%	68%	47%	50%	59%	50%	52%	79%
Leaden Roding	62%	77%	64%	55%	53%	61%	56%	35%	8%	45%	38%	85%	54%	37%	33%	12%
Epping	54%	95%	78%	20%	85%	95%	90%	92%	61%	98%	85%	98%	72%	60%	98%	78%

	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul
Colchester	98%	89%	91%	95%	97%	92%	89%	89%	85%	100%	97%	95%	96%	94%	92%
Dovercourt	93%	100%	92%	100%	100%	97%	84%	94%	97%	100%	93%	99%	96%	95%	100%
Clacton & Weeley	96%	94%	84%	99%	95%	98%	88%	92%	99%	86%	96%	98%	97%	92%	100%
Manningtree	63%	89%	95%	68%	45%	86%	29%	86%	98%	75%	0%	0%	11%	0%	0%
Frinton	56%	91%	59%	64%	66%	40%	37%	63%	76%	48%	53%	65%	38%	33%	27%
Brightlingsea	69%	58%	97%	100%	100%	64%	68%	66%	52%	82%	82%	90%	88%	69%	35%
Wivenhoe	43%	36%	72%	83%	96%	96%	65%	27%	65%	94%	91%	82%	29%	0%	11%
West Mersea	100%	84%	86%	100%	100%	60%	13%	28%	41%	6%	28%	74%	8%	0%	15%
Tiptree	60%	70%	96%	100%	70%	98%	70%	60%	73%	94%	89%	96%	84%	68%	0%
Coggeshall	70%	60%	77%	91%	99%	37%	36%	14%	70%	70%	85%	75%	57%	70%	69%
Witham	99%	88%	98%	96%	100%	100%	88%	94%	92%	86%	69%	100%	96%	95%	100%
Southend	94%	92%	97%	97%	95%	97%	96%	98%	99%	97%	100%	97%	98%	97%	98%
Leigh	66%	85%	91%	83%	94%	90%	81%	89%	84%	98%	96%	83%	81%	80%	90%
South Woodham	86%	77%	88%	65%	27%	58%	82%	92%	100%	83%	83%	33%	23%	2%	61%
Great Baddow	18%	74%	48%	30%	44%	25%	0%	0%	26%	61%	50%	64%	43%	0%	93%
Chelmsford	90%	91%	95%	95%	94%	98%	86%	96%	97%	96%	93%	97%	91%	89%	96%
Rayleigh Weir & Hawkwell	95%	91%	93%	94%	95%	95%	99%	100%	99%	100%	100%	96%	99%	94%	100%
Shoeburyness	89%	67%	98%	97%	78%	82%	78%	64%	67%	98%	78%	88%	86%	52%	86%
Burnham & Tilligham	90%	96%	100%	100%	87%	98%	93%	100%	98%	100%	98%	99%	84%	87%	100%
Tollesbury	93%	60%	82%	88%	50%	33%	14%	36%	52%	48%	50%	52%	42%	73%	47%
Maldon	100%	89%	96%	86%	90%	100%	98%	99%	100%	100%	100%	100%	94%	94%	100%
Rochford	49%	59%	85%	44%	41%	53%	62%	90%	84%	93%	94%	27%	23%	72%	100%
Grays	91%	99%	74%	93%	94%	90%	86%	88%	95%	97%	99%	99%	91%	97%	95%
Brentwood & Ingatestone	85%	74%	74%	87%	92%	98%	85%	94%	97%	86%	99%	95%	85%	83%	93%
Basilidon	85%	91%	86%	79%	89%	96%	90%	100%	96%	97%	93%	86%	98%	94%	100%
Canvey	98%	87%	87%	86%	85%	100%	99%	100%	99%	99%	100%	96%	98%	93%	100%
Orsett	76%	78%	58%	27%	89%	75%	82%	87%	51%	71%	85%	78%	56%	84%	91%
Corringham	80%	83%	60%	73%	79%	70%	72%	92%	95%	92%	87%	86%	52%	78%	79%
Billericay	91%	78%	60%	55%	67%	31%	18%	46%	68%	84%	36%	54%	8%	0%	46%
Wickford	85%	71%	72%	77%	63%	76%	47%	85%	90%	99%	98%	71%	50%	26%	55%
Harlow Central	93%	97%	88%	97%	90%	95%	93%	96%	96%	95%	94%	96%	98%	98%	90%
Ongar	0%	10%	55%	15%	58%	25%	0%	0%	0%	33%	56%	67%	64%	32%	0%
Loughton & Waltham Abbey	98%	93%	95%	100%	92%	98%	88%	100%	95%	92%	96%	91%	99%	90%	100%
Braintree	70%	85%	88%	96%	91%	95%	95%	86%	92%	90%	97%	98%	72%	97%	92%
Wethersfield	0%	43%	84%	81%	84%	63%	0%	0%	25%	28%	49%	82%	40%	0%	0%
Sible Hedingham & Halstead	97%	88%	93%	98%	100%	100%	100%	88%	98%	100%	96%	86%	99%	100%	98%
Old Harlow	22%	77%	69%	59%	28%	25%	41%	0%	14%	71%	47%	51%	28%	8%	0%
Stansted & Dunmow	99%	93%	91%	100%	96%	94%	98%	88%	94%	100%	100%	100%	100%	91%	100%
Newport	80%	97%	81%	87%	95%	96%	97%	86%	82%	100%	98%	100%	95%	93%	100%
Saffron Walden	90%	98%	84%	94%	99%	100%	100%	88%	98%	100%	100%	100%	100%	99%	100%
Thaxted	71%	62%	64%	56%	57%	53%	84%	75%	53%	56%	58%	53%	58%	70%	89%
Leaden Roding	75%	80%	75%	75%	64%	34%	31%	47%	10%	82%	84%	71%	35%	0%	0%
Epping	80%	82%	59%	72%	90%	98%	77%	81%	98%	90%	88%	97%	82%	84%	96%

During August, up to and including 20 August, the average coverage of stations was **72%**, with an average of **91%** cover across the strategic stations.

	01-Aug	02-Aug	03-Aug	04-Aug	05-Aug	06-Aug	07-Aug	08-Aug	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug	19-Aug
Colchester	94%	90%	84%	83%	85%	85%	93%	87%	92%	87%	82%	89%	87%	90%	89%	94%	97%	97%	96%
Dovercourt	96%	83%	89%	93%	94%	92%	97%	96%	95%	83%	97%	98%	90%	98%	97%	100%	100%	97%	100%
Clacton & Weeley	98%	94%	88%	95%	100%	98%	96%	95%	100%	94%	97%	100%	91%	92%	99%	98%	99%	99%	96%
Manningtree	0%	28%	30%	0%	0%	0%	51%	62%	68%	75%	84%	6%	0%	0%	99%	61%	59%	84%	73%
Frinton	50%	73%	46%	59%	38%	30%	25%	59%	63%	62%	64%	42%	2%	57%	27%	89%	73%	91%	46%
Brightlingsea	99%	72%	51%	93%	66%	68%	67%	56%	65%	62%	24%	68%	78%	71%	64%	30%	75%	58%	73%
Wivenhoe	95%	34%	19%	33%	50%	0%	15%	62%	44%	50%	65%	92%	66%	33%	53%	35%	84%	99%	78%
West Mersea	18%	41%	46%	55%	76%	85%	81%	76%	100%	100%	90%	96%	96%	90%	100%	97%	38%	0%	0%
Tiptree	0%	22%	46%	61%	99%	22%	0%	0%	0%	12%	52%	27%	64%	38%	55%	53%	33%	32%	100%
Coggeshall	23%	35%	49%	45%	33%	40%	42%	74%	38%	40%	0%	1%	9%	64%	75%	51%	58%	67%	13%
Witham	99%	100%	89%	96%	100%	98%	94%	94%	92%	81%	87%	92%	76%	99%	90%	96%	91%	97%	99%
Southend	98%	97%	97%	98%	98%	93%	98%	99%	94%	99%	92%	99%	82%	92%	96%	97%	100%	89%	99%
Leigh	95%	97%	84%	95%	72%	90%	98%	100%	96%	83%	86%	91%	58%	77%	88%	96%	98%	81%	72%
South Woodham	52%	59%	92%	59%	21%	0%	0%	56%	46%	80%	73%	48%	37%	24%	60%	73%	100%	65%	34%
Great Baddow	49%	100%	66%	19%	17%	42%	0%	3%	37%	72%	37%	62%	53%	49%	52%	24%	55%	82%	71%
Chelmsford	95%	97%	92%	88%	80%	88%	89%	96%	90%	87%	80%	88%	78%	100%	84%	98%	87%	97%	97%
Rayleigh Weir & Hawkwell	100%	99%	98%	100%	99%	100%	100%	100%	100%	100%	93%	87%	79%	75%	94%	99%	96%	98%	92%
Shoeburyness	93%	94%	37%	60%	57%	77%	76%	88%	89%	92%	88%	83%	58%	32%	88%	100%	94%	97%	77%
Burnham & Tilligham	99%	100%	100%	100%	96%	100%	100%	97%	98%	100%	100%	91%	100%	100%	100%	88%	95%	92%	92%
Tollesbury	46%	56%	36%	19%	56%	37%	81%	65%	44%	44%	50%	45%	57%	90%	84%	54%	60%	53%	39%
Maldon	100%	100%	100%	91%	96%	93%	96%	98%	94%	91%	91%	79%	95%	97%	95%	100%	100%	100%	97%
Rochford	94%	78%	66%	89%	23%	86%	98%	50%	96%	77%	74%	69%	73%	70%	85%	66%	51%	94%	80%
Grays	98%	98%	90%	96%	90%	99%	99%	92%	99%	93%	89%	94%	80%	81%	96%	91%	98%	98%	98%
Brentwood & Ingatestone	86%	85%	80%	90%	74%	77%	96%	84%	82%	88%	73%	72%	70%	82%	89%	93%	85%	93%	94%
Basildon	95%	96%	85%	94%	95%	91%	97%	99%	97%	89%	78%	84%	76%	82%	98%	96%	90%	90%	95%
Canvey	94%	95%	100%	80%	94%	93%	100%	93%	98%	98%	88%	100%	78%	84%	90%	99%	99%	100%	99%
Orsett	59%	53%	47%	74%	75%	94%	95%	85%	90%	75%	85%	92%	23%	56%	87%	91%	97%	62%	92%
Corringham	86%	100%	69%	75%	59%	77%	99%	78%	79%	61%	71%	55%	69%	42%	96%	94%	75%	72%	88%
Billericay	53%	61%	26%	9%	27%	0%	14%	53%	54%	59%	84%	33%	0%	28%	36%	47%	46%	60%	61%
Wickford	65%	98%	53%	77%	90%	49%	95%	69%	90%	59%	79%	69%	61%	18%	75%	97%	98%	91%	84%
Harlow Central	92%	94%	99%	88%	90%	91%	88%	96%	95%	96%	93%	78%	79%	84%	85%	93%	91%	100%	95%
Ongar	0%	0%	0%	8%	15%	0%	0%	19%	0%	0%	0%	0%	6%	53%	25%	0%	0%	24%	41%
Loughton & Waltham Abbey	95%	92%	92%	80%	85%	75%	85%	91%	80%	90%	96%	95%	78%	94%	88%	99%	79%	100%	92%
Braintree	91%	63%	77%	81%	93%	97%	97%	83%	86%	61%	86%	77%	91%	91%	80%	87%	88%	88%	92%
Wethersfield	27%	18%	25%	36%	32%	0%	0%	27%	37%	23%	72%	19%	40%	80%	69%	21%	29%	51%	33%
Sible Hedingham & Halstead	98%	100%	99%	98%	99%	100%	100%	100%	94%	90%	99%	98%	95%	95%	99%	99%	99%	100%	90%
Old Harlow	19%	51%	59%	97%	35%	93%	38%	25%	32%	33%	38%	21%	0%	15%	9%	23%	29%	38%	31%
Stansted & Dunmow	100%	91%	95%	95%	92%	91%	100%	93%	82%	99%	95%	86%	98%	99%	95%	96%	99%	100%	97%
Newport	90%	94%	98%	95%	99%	76%	100%	98%	96%	97%	85%	86%	64%	99%	87%	100%	87%	97%	97%
Saffron Walden	99%	99%	100%	97%	95%	100%	100%	100%	100%	93%	99%	69%	100%	100%	99%	100%	99%	100%	100%
Thaxted	58%	59%	59%	44%	68%	61%	79%	60%	55%	58%	42%	49%	63%	67%	60%	35%	45%	58%	60%
Leadon Roding	0%	0%	0%	0%	0%	0%	0%	39%	53%	52%	56%	62%	51%	14%	52%	53%	52%	32%	25%
Epping	88%	85%	86%	89%	85%	74%	89%	65%	79%	96%	78%	79%	72%	56%	97%	85%	79%	100%	55%

Pump Utilisation/Availability

The following charts summarise the status of each pump at hourly intervals on 13 August 2022 when pump utilisation reached 75%, with 36 of available pumps showing a status of attending an incident. These charts currently only provide a visual summary of status and so should not be used to calculate exact timings. For example, if a pump was shown at scene for part of an hour, then the full hour will be shown as at scene.

The following colour coding has been used:
 Green = Available, Orange = At Scene and Red = Off the Run.

During the time frame 18:00-19:00, Colchester was the main station where there were 2 pumps available. As mentioned above, this chart serves only to provide a quick visual guide to the situation, and not an in-depth analysis. If further details are required for individual pumps on specific days, this can be provided.

			00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
			00:59	01:59	02:59	03:59	04:59	05:59	06:59	07:59	08:59	09:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:59	21:59	22:59	23:59	
Colchester	10P2	Wholetime																									
Colchester	10P3	Wholetime																									
Dovercourt	11P1	On Call																									
Dovercourt	11P2	On Call																									
Clacton	12P1	Wholetime																									
Clacton	12P2	On Call																									
Manningtree	17P1	On Call																									
Frinton	18P1	On Call																									
Weeley	19P1	On Call																									
Brightlingsea	20P1	On Call																									
Wivenhoe	21P1	On Call																									
West Mersea	22P1	On Call																									
Tiptree	23P1	On Call																									
Coggeshall	24P1	On Call																									
Witham	25P1	On Call																									
Witham	25P2	On Call																									
Southend	30P1	Wholetime																									
Southend	30P2	Wholetime																									
Leigh	31P1	Wholetime																									
South Woodham	32P1	On Call																									
Great Baddow	33P1	On Call																									
Chelmsford	34P2	Wholetime																									
Chelmsford	34P3	Wholetime																									
Rayleigh Weir	35P3	Wholetime																									
Shoeburyness	42P1	On Call																									
Burnham	43P1	On Call																									
Tillingham	44P1	On Call																									
Tollesbury	45P1	On Call																									
Maldon	46P1	On Call																									
Maldon	46P2	On Call																									
Haw kwell	47P1	On Call																									
Rochford	49P1	On Call																									
Grays	50P2	Wholetime																									
Grays	50P3	Wholetime																									
Brentwood	51P2	On Call																									
Brentwood	51P3	Wholetime																									
Basildon	52P1	Wholetime																									
Basildon	52P2	Wholetime																									
Canvey	54P1	On Call																									
Canvey	54P2	On Call																									
Orsett	55P1	Wholetime																									
Corringham	66P1	On Call																									
Ingatstone	67P1	On Call																									
Billericay	68P1	On Call																									
Wickford	69P1	On Call																									
Harlow Central	70P1	Wholetime																									
Harlow Central	70P2	Wholetime																									
Ongar	71P1	On Call																									
Loughton	72P3	Wholetime																									
Waltham Abbey	73P1	On Call																									
Braintree	78P1	On Call																									
Braintree	78P2	On Call																									
Wethersfield	79P1	On Call																									
Sible Hedingham	80P1	On Call																									
Halstead	81P1	On Call																									
Halstead	81P2	On Call																									
Old Harlow	82P1	On Call																									
Stansted	83P1	On Call																									
New port	84P3	On Call																									

Mobilisations

The chart below summarises the initial number of Pump, Officer, and Special mobilisations per day to an incident, and compares the number of pump mobilisation to the five-year average per day. Following the trend of the increased number of incidents over the heatwave period, the number of mobilisations reflects the number of incidents, not just for pumps, but for officer deployments too. The number of mobilisations is more apparent during the 15 - 23 July, however nearly every day saw more mobilisations than compared to the five-year average. The 18 July saw nearly double the number of mobilisations than the five-year average, **201** mobilisations compared to an average of **108**.

	All Mobilisations			Pump Mobilisations					
	Pump	Officer Car	Special	2021	2020	2019	2018	5 yr Avg	
01/07/2022	61	1	0	67	137	103	90	92	-33%
02/07/2022	60	1	1	37	72	92	114	75	-20%
03/07/2022	93	1	0	68	74	57	79	74	25%
04/07/2022	102	7	5	72	78	46	80	76	35%
05/07/2022	83	2	0	41	75	51	70	64	30%
06/07/2022	84	5	1	43	36	73	63	60	40%
07/07/2022	89	4	4	68	54	49	81	68	30%
08/07/2022	94	3	0	71	42	81	83	74	27%
09/07/2022	108	3	7	66	57	89	96	83	30%
10/07/2022	106	9	5	59	54	64	109	78	35%
11/07/2022	145	12	8	54	66	77	122	93	56%
12/07/2022	94	5	2	58	40	65	114	74	27%
13/07/2022	91	5	7	80	61	94	96	84	8%
14/07/2022	104	5	3	89	61	66	99	84	24%
15/07/2022	140	6	3	58	55	61	90	81	73%
16/07/2022	128	9	9	70	78	65	97	88	46%
17/07/2022	161	9	15	99	57	54	92	93	74%
18/07/2022	201	18	14	64	74	86	116	108	86%
19/07/2022	191	17	12	87	72	75	139	113	69%
20/07/2022	145	11	8	76	68	102	104	99	46%
21/07/2022	126	8	10	71	75	85	132	98	29%
22/07/2022	107	5	2	78	65	92	99	88	21%
23/07/2022	156	6	5	64	65	53	100	88	78%
24/07/2022	133	14	14	99	43	51	72	80	67%
25/07/2022	103	5	4	80	50	88	54	75	37%
26/07/2022	101	3	6	90	57	62	80	78	29%
27/07/2022	90	4	1	54	74	56	88	72	24%
28/07/2022	118	7	9	39	81	81	67	77	53%
29/07/2022	90	5	3	84	128	60	82	89	1%
30/07/2022	116	3	1	73	86	72	84	86	35%
31/07/2022	68	5	4	52	78	69	94	72	-6%

August also experienced higher than average number of mobilisations, with 11, 13 and 14 August seeing double the number of mobilisations compared to The five-year average for each of these days. This too reflects the numbers of incidents per day.

	All Mobilisations			Pump Mobilisations					
	Pump	Officer Car	Special	2021	2020	2019	2018	5 yr Avg	
01/08/2022	99	5	8	47	109	68	121	89	11%
02/08/2022	99	6	1	77	110	86	69	88	12%
03/08/2022	132	12	20	76	63	69	65	81	63%
04/08/2022	142	8	2	56	83	74	60	83	71%
05/08/2022	163	11	9	47	113	88	39	90	81%
06/08/2022	113	6	3	52	102	85	74	85	33%
07/08/2022	88	2	0	37	94	57	72	70	26%
08/08/2022	101	1	6	61	83	59	58	72	40%
09/08/2022	122	10	4	76	100	71	69	88	39%
10/08/2022	98	7	5	75	65	85	75	80	23%
11/08/2022	154	14	9	44	81	55	61	79	95%
12/08/2022	136	10	19	61	70	78	75	84	62%
13/08/2022	174	18	18	69	73	60	70	89	95%
14/08/2022	159	8	8	65	63	64	48	80	99%
15/08/2022	130	4	3	79	63	71	70	83	57%
16/08/2022	96	3	3	57	71	48	69	68	41%
17/08/2022	114	7	2	74	62	63	87	80	43%
18/08/2022	92	2	0	71	57	83	56	72	28%
19/08/2022	88	4	1	38	85	76	49	67	31%
20/08/2022	67	2	0	73	52	91	66	70	-4%
21/08/2022	78	4	1	68	64	113	51	75	4%

9 out of 10 top pump mobilisations since 1 January 2017 have occurred in either July or August 2022. The top 2 days are the two heatwave days in July. The third ranked day occurring in February 2022 during Storm Eunice. In fact, all of the top 10 mobilisations per day have occurred in 2022.

Top 10 'Fire' Pump Mobilisations by Day since 1st Jan 2017

Rank	Date	# Mobs
1	18/07/22	201
2	19/07/22	191
3	18/02/22	183
4	13/08/22	174
5	05/08/22	163
6	17/07/22	161
7	14/08/22	159
8	23/07/22	156
9	11/08/22	154
10	11/07/22	145

Over the border Incidents

During July there were **79** pumps responding to incidents outside of Essex, and **151** pumps called in to assist. Of the pumps crossing into Essex, 38% were from Hertfordshire, 30% from London, 19% from Suffolk and 13% from Cambridgeshire. The over the border incidents responded to by Essex resulted in 53% of the pumps assisting London, 20% assisting Hertfordshire, 21% assisting Suffolk and 5% assisting Cambridgeshire.

During August up to 20th August there were **21** pumps responding to incidents outside of Essex and **179** called in to assist. Of the pumps crossing into Essex, 42% were from London, 36% from Hertfordshire, 19% from Suffolk and 5% from Cambridgeshire. The over the border incidents responded to by Essex resulted in 48% of the pumps assisting Hertfordshire, 28% assisting Suffolk and 24% assisting London.

There is a piece of work ongoing, looking into streamlining the invoicing process between partner fire authorities, and ensuring that the same data is requested and transferred between the authorities. An update to this will be provided in due course.

Call Volumes and breakdown

During July 2022, 5,792 calls were received by the control room, 47% above the average for the five-year period of 3,937 calls.

For August up to and including 20 August 2022, there were 4,430 calls received, a 78% increase on the comparable period five-year average of 2,492 calls.

The 18 and 19 July both appear in the top 10 of the most calls received per day since 1st January 2017. The top 2 number of calls are during the Storm Eunice period.

Rank	Date	# Incidents
1	18/02/22	241
2	20/02/22	225
3	19/07/22	204
4	25/09/20	181
5	14/01/21	181
6	23/02/17	180
7	18/07/22	157
8	19/02/22	154
9	25/07/21	154
10	20/10/21	154

Finance

- Awaiting data from Finance – To be submitted.

Occupational Health

Occupational Health dealt with heat exhaustion queries and ensured that stations were aware of rehydration and electrolyte supplements, with input from the Fitness team. Occupational Health clinicians were 'on-call' via Control to follow up with firefighters who were unwell with heat exhaustion.

Occupational Health issued guidance on what to look out for in crews and circulated FBU/Brighton University advice on first aid for heat affected firefighters.

Health and Safety

Health and Safety issued advice prior to, and during, the heatwave regarding rehydration and heat/sun exposure.

Welfare facilities and access to water were discussed in the quarterly Functional Forum meeting, with actions to Facilities and CIT.

Conclusion

July and August both experienced an increase in incidents above the average number of incidents for the same time periods. There was a notable increase in the number of fire incidents, with a strong link to the ongoing high temperatures and dry conditions. Outdoor fires were the main type of fire, with many of the incidents requiring high levels of attendance, and time at the scene.

Future Analysis

This paper is an information paper at this stage but will form the basis of further analysis into heatwaves and increased number of incidents. Further analysis into these months is ongoing, as more information becomes available, such as the financial data.

The methods and information used to evaluate this period can be transferred to other ongoing analysis to provide a solid bedrock of future analytical reporting.

Number of Mobilisations per Day

Pumps

CallSign	StationName	CrewingType	ApplianceType	16/07/2022	17/07/2022	18/07/2022	19/07/2022	20/07/2022	21/07/2022	22/07/2022	23/07/2022	24/07/2022
10P2	Colchester	Wholetime	Water Tender	4	2	8	10	7	5	7	9	5
10P3	Colchester	Wholetime	Heavy Rescue Pump	2	-	4	7	5	2	7	6	5
11P1	Dovercourt	On Call	Rescue Pump	1	1	-	2	-	-	2	5	2
11P2	Dovercourt	On Call	Water Tender	2	-	1	2	-	-	1	1	1
12P1	Clacton	Wholetime	Rescue Pump	7	4	6	4	2	7	2	4	7
12P2	Clacton	On Call	Water Tender	2	-	1	-	1	-	2	-	-
17P1	Manningtree	On Call	Rescue Pump	1	1	1	1	-	-	1	1	-
18P1	Frinton	On Call	Rescue Pump	2	-	1	2	1	-	-	-	3
19P1	Weeley	On Call	Rescue Pump	3	4	4	3	2	4	2	6	1
20P1	Brightlingsea	On Call	Rescue Pump	3	2	1	-	-	-	-	1	3
21P1	Wivenhoe	On Call	Rescue Pump	2	-	2	1	1	1	2	1	3
22P1	West Mersea	On Call	Rescue Pump	-	-	1	1	-	-	-	-	1
23P1	Tiptree	On Call	Rescue Pump	1	-	4	-	-	2	-	-	1
24P1	Coggeshall	On Call	Rescue Pump	3	3	2	2	3	1	-	2	2
25P1	Witham	On Call	Rescue Pump	-	1	-	-	1	2	1	2	1
25P2	Witham	On Call	Water Tender	1	1	2	5	2	-	-	2	-
30P1	Southend	Wholetime	Rescue Pump	3	3	7	2	4	3	2	5	1
30P2	Southend	Wholetime	Water Tender	4	4	7	4	8	3	3	6	4
31P1	Leigh	Wholetime	Rescue Pump	1	3	2	6	2	4	4	4	4
32P1	South Woodham	On Call	Rescue Pump	5	1	4	2	1	-	1	2	1
33P1	Great Baddow	On Call	Rescue Pump	-	-	4	3	1	3	-	-	-
34P2	Chelmsford	Wholetime	Water Tender	3	10	9	8	6	2	5	9	5
34P3	Chelmsford	Wholetime	Heavy Rescue Pump	3	5	7	9	4	4	3	8	2
35P3	Rayleigh Weir	Wholetime	Heavy Rescue Pump	3	5	7	3	5	5	2	3	4
42P1	Shoeburyness	On Call	Rescue Pump	1	5	6	1	1	2	2	1	1
43P1	Burnham	On Call	Rescue Pump	-	2	3	-	-	4	1	-	-
44P1	Tillingham	On Call	Rescue Pump	-	-	1	-	-	-	-	-	-
45P1	Tollesbury	On Call	Rescue Pump	-	-	1	1	1	1	-	-	1
46P1	Maldon	On Call	Rescue Pump	3	-	5	-	3	2	-	1	1
46P2	Maldon	On Call	Water Tender	1	-	1	3	-	2	1	3	2
47P1	Hawkwell	On Call	Rescue Pump	1	1	6	5	6	4	3	-	-
49P1	Rochford	On Call	Rescue Pump	-	3	6	2	1	-	3	2	1
50P2	Grays	Wholetime	Water Tender	3	5	3	5	3	1	2	4	6
50P3	Grays	Wholetime	Heavy Rescue Pump	-	4	1	4	2	-	5	8	3
51P2	Brentwood	On Call	Water Tender	-	-	-	-	-	-	-	-	-
51P3	Brentwood	Wholetime	Heavy Rescue Pump	4	4	9	1	2	4	2	5	2
52P1	Basilidon	Wholetime	Rescue Pump	3	6	5	4	4	8	2	8	1
52P2	Basilidon	Wholetime	Water Tender	5	7	6	7	8	8	5	4	4
54P1	Canvey	On Call	Rescue Pump	1	1	2	3	3	2	-	1	-
54P2	Canvey	On Call	Water Tender	-	2	1	2	1	1	-	-	1
55P1	Orsett	Wholetime	Rescue Pump	6	7	5	8	3	4	7	2	3
66P1	Corringham	On Call	Rescue Pump	3	5	1	5	5	1	3	3	1
67P1	Ingatestone	On Call	Rescue Pump	-	-	-	-	-	-	-	-	-
68P1	Billericay	On Call	Rescue Pump	-	2	2	4	2	1	-	-	-
69P1	Wickford	On Call	Rescue Pump	4	1	4	2	6	1	3	2	3
70P1	Harlow Central	Wholetime	Rescue Pump	3	4	-	3	5	3	5	4	2
70P2	Harlow Central	Wholetime	Water Tender	5	3	6	4	3	10	5	8	5
71P1	Ongar	On Call	Rescue Pump	-	-	-	2	-	5	-	-	-
72P3	Loughton	Wholetime	Heavy Rescue Pump	5	6	6	5	4	2	1	5	3
73P1	Waltham Abbey	On Call	Rescue Pump	2	3	3	4	2	2	1	4	2
78P1	Braintree	On Call	Rescue Pump	4	2	6	3	3	1	3	3	5
78P2	Braintree	On Call	Water Tender	-	-	-	2	2	-	1	-	-
79P1	Wethersfield	On Call	Rescue Pump	-	-	1	2	-	-	-	-	-
80P1	Sible Hedingham	On Call	Rescue Pump	-	-	-	1	1	-	-	-	-
81P1	Halstead	On Call	Rescue Pump	1	2	2	4	1	-	-	-	3
81P2	Halstead	On Call	Water Tender	1	-	1	3	-	-	1	-	-
82P1	Old Harlow	On Call	Rescue Pump	-	3	2	3	2	-	-	-	-
83P1	Stansted	On Call	Rescue Pump	3	5	3	2	1	2	-	1	4
84P3	Newport	On Call	Heavy Rescue Pump	3	3	1	2	3	1	-	-	7
85P1	Saffron Walden	On Call	Rescue Pump	1	9	2	1	2	1	-	-	3
85P2	Saffron Walden	On Call	Water Tender	2	5	2	1	4	1	1	-	5
86P1	Thaxted	On Call	Rescue Pump	3	4	3	5	-	-	-	3	2
87P1	Dunmow	On Call	Rescue Pump	2	-	3	4	-	3	2	-	5
87P2	Dunmow	On Call	Water Tender	-	-	1	-	-	-	-	-	-
88P1	Leaden Roding	On Call	Rescue Pump	-	3	2	5	3	-	-	1	-
89P1	Epping	On Call	Rescue Pump	2	3	4	1	2	1	1	8	1

Specials

CallSign	StationName	CrewingType	ApplianceType	16/07/2022	17/07/2022	18/07/2022	19/07/2022	20/07/2022	21/07/2022	22/07/2022	23/07/2022	24/07/2022
34R3	Chelmsford	Special	Animal Recue Unit	1	3	2	-	1	1	-	2	1
83M2	Stansted	Special	Off Road Vehicle	-	2	-	3	-	2	1	1	1
14B1	USAR	Special	Swift Water Rescue Boat	1	2	-	1	-	1	-	-	3
34A1	Chelmsford	Special	Aerial Ladder Platform	-	2	-	-	2	1	-	-	-
25M4	Witham	Special	Command Support Ranger	1	2	1	-	-	-	-	-	1
25C1	Witham	Special	Incident Command Unit	1	2	1	-	-	-	-	-	1
43M2	Burnham	Special	Off Road Vehicle	1	-	3	1	-	-	-	-	-
10A1	Colchester	Special	Aerial Ladder Platform	-	-	1	1	-	-	-	1	1
81W1	Halstead	Special	Water Bowser	1	-	1	1	-	-	-	-	1
66W1	Corringham	Special	Water Bowser	-	-	-	1	-	1	1	-	1
14R4	USAR	Special	4x4 Ranger - Rope Rescue	-	-	1	1	-	1	-	-	-
50A1	Grays	Special	Aerial Ladder Platform	-	-	-	-	2	-	-	1	-
47C1	Hawkwell	Special	Incident Command Unit	-	-	1	-	1	-	-	-	1
14R8	USAR	Special	K9 UNIT	1	-	-	-	1	1	-	-	-
17M2	Manningtree	Special	Off Road Vehicle	-	-	1	1	-	-	-	-	1
68M2	Billericay	Special	Off Road Vehicle	1	2	-	-	-	-	-	-	-
47M4	Hawkwell	Special	4x4 Ranger	-	-	-	-	-	1	-	-	1
30A1	Southend	Special	Aerial Ladder Platform	-	-	-	-	-	1	-	-	1
24M4	Coggeshall	Special	Decon Ranger	1	-	-	-	-	-	-	-	-
70H8	Harlow Central	Special	DIM Vehicle	-	-	-	-	1	-	-	-	-
46T1	Maldon	Special	Prime Mover	-	-	1	-	-	-	-	-	-
14T9	USAR	Special	Prime Mover 5	-	-	1	-	-	-	-	-	-
10B1	Colchester	Special	Swift Water Rescue Boat	-	-	-	1	-	-	-	-	-
22R2	West Mersea	Special	Water Rescue Ranger	-	-	-	1	-	-	-	-	-

Officers

CallSign	16/07/2022	17/07/2022	18/07/2022	19/07/2022	20/07/2022	21/07/2022	22/07/2022	23/07/2022	24/07/2022
S045	1	1	4	-	1	2	1	-	-
S072	-	-	1	4	-	-	-	2	2
S032	-	-	-	3	-	-	-	1	3
S112	1	3	1	-	1	1	-	-	-
S042	-	-	2	4	-	-	-	-	-
S025	-	-	2	1	1	-	1	-	-
S088	-	-	-	-	-	-	-	2	3
S120	-	1	-	-	3	1	-	-	-
G071	1	1	2	-	-	-	-	-	-
S026	-	-	-	-	-	-	1	1	2
S079	2	1	-	-	1	-	-	-	-
S107	-	-	-	-	-	1	-	-	3
S028	-	-	1	1	-	1	-	-	-
S038	-	-	1	1	-	-	-	-	1
S118	1	-	1	-	-	1	-	-	-
S023	1	-	-	1	-	-	-	-	-
S036	-	2	-	-	-	-	-	-	-
S054	-	-	-	-	-	-	2	-	-
S078	-	-	-	-	1	1	-	-	-
S104	1	-	-	-	1	-	-	-	-
A151	-	-	1	-	-	-	-	-	-
G134	-	-	-	-	1	-	-	-	-
S065	-	-	-	1	-	-	-	-	-
S084	-	-	1	-	-	-	-	-	-
S085	-	-	1	-	-	-	-	-	-
S087	1	-	-	-	-	-	-	-	-
S116	-	-	-	-	1	-	-	-	-
S119	-	-	-	1	-	-	-	-	-