10 Year Business Intelligence Report Executive Summary 2014/15 - 2023/24

V1.1

**COMMUNITY RISK MANAGEMENT PLANNING
STRATEGY & PERFORMANCE FUNCTION
STRATEGIC LEADERSHIP TEAM**

Document Control

Amendment History

Version / Issue No.	Date	Author	Remarks / Reason for Change
0.1		R Hanson	
1.0	30/07/2024	R Hanson	Amendments as per J Fielding's Comments
1.1	15/08/2024	R Hanson	Amendments as per D Appleton and M Rice

Sign-Off List

Name	Position
AM Ryder	Area Manager - Operational Response
Deb Appleton	Director of Strategy & Performance
Mark Rice	Cyber Security and Information Manager
John Fielding	Business Intelligence Manager

Distribution List

Name	Position	I / R
Strategic Leadership Team		
ACFO Mottram	Assistant Chief Fire Officer	
Deb Appleton	Director of Strategy & Performance	
Paul Terry	Head of ICT	
Jackie Sutton	CRMP Officer	
AM Longshaw	Area Manager – Protection	
AM Murphy	Area Manager – National Resilience	
AM Ryder	Area Manager – Operational Response	
AM Sheridan	Area Manager – Operational Preparedness	
AM Thomas	Area Manager – Prevention	

Ownership

Has it been agreed with the client that this is a publicly owned document?
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If No please state reason why:

1. Agreement

For the purpose of this report the following agreement was made between the client and the Strategy & Performance function.

This work was requested by the Strategic Planning officer and the Area Manager for Operational Response and received on 01/04/2024.

The Manager[1] has approved this report/ piece of work can be undertaken by the Strategy & Performance Directorate.

If the scope of the work changes, authorisation must be again obtained and would be noted within the version control document sheet.

It was agreed that this report would be produced in draft format by 31st July 2024 and would be sent electronically to the Director of Strategy & Performance and Client for comment.

The Manager / Client agreed that their comments would be received back by 31st July 2024.

The final report, which will always be in PDF format, would be produced by 31st July 2024, subject to receiving comments.

2. Related Documents

Reference No.	Title	Author	Version & Date
1.0	Retrospective Incidents 2014/15 – 2023/24	R Hanson	30/07/2024
2.0	Retrospective ADF and RTC Fatality & Injury 2019/20 – 2023/24	R Hanson	30/07/2024
3.0	Review of Activity - 2023/24	R Hanson	30/07/2024
4.0	Fatality Trend Analysis – 2004/05 to 2023/24	J Fielding	30/07/2024
5.0	Target Setting and Performance Management Methodology	J Fielding D Appleton	01/3/2013
6.0	Previous Business Intelligence Reports: 3-5 Yr Business Intelligence Report	R Hanson	Last updated: June 2023
7.0	IRMP Maps and Charts PowerPoint stored on the Portal	R Hanson	

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[1] Deb Appleton

3. Glossary of Terms

Term	Description
Accidental Dwelling Fire (ADF)	A fire that usually occurs within a house or flat where the motive is either 'Accidental' or 'Unknown'
Accidental Non Domestic Property Fire	A fire that has occurred at a site that is not used as domestic residence including retail units, leisure facilities, warehouses, etc with a motive of 'Accidental' or 'Unknown'
Accidental Secondary Fire	A small fire that has a motive of either 'Accidental' or 'Unknown'
Accidental Vehicle Fire	A fire involving a vehicle that has a motive of either 'Accidental' or 'Unknown'
AFA Domestic & Other	An incident caused by a fault or false reading within an Automatic Fire Alarm detection system at sites including houses, flats, hostels, etc.
AFA Non Domestic Property	An incident caused by a fault or false reading within an Automatic Fire Alarm detection system at sites including retail units, leisure facilities, warehouses, etc.
Day Crew	Shift pattern that works between 08:30 and 20:30.
Deliberate Dwelling Fire	A fire that usually occurs within a house or flat where the motive is 'Deliberate'
Deliberate Non Domestic Property Fire	A fire that has occurred at a site that is not used as domestic residence including retail units, leisure facilities, warehouses, etc with a motive of 'Deliberate'
Deliberate Secondary Fire	A small fire that that the incident Officer in Charge has decided was 'Deliberate'
Deliberate Vehicle Fire	A fire involving a vehicle that the incident Officer in Charge has decided was 'Deliberate'
False Alarm Good Intent (FAGI)	A fire call made with good intentions, e.g. mistaking steam from a central heating system as smoke
False Alarm Malicious	A fire call made with malicious intention to cause harm or distress to an occupier or disruption to emergency services
IIT	Incident Investigation Team
IRMP	Integrated Risk Management Plan
IRS	Incident Recording System
KPI	Key Performance Indicator
LLAR	Low Level Activity Risk. Also a shift pattern worked between 10:00 and 22:00
LPI	Local Performance Indicator
MF&RS	Merseyside Fire & Rescue Service
NDP	Non Domestic Property
NI	National Indicator
Other Property Fire	This covers all other incidents affecting insurable property or incidents of 5 pumps or more.
Special Service	An incident that is not a fire or false alarm. These incidents include Water Rescues, Lift Rescues, etc.
Special Service – RTC	A specific type of Special Service involving road traffic collisions

4. Introduction

The purpose of this report is to present a high level update to the 3-5 Year Business Intelligence Report which has been produced since the 2008/09 Integrated Risk Management Plan (IRMP). The original report, which was authored during 2008/09, included data and analysis from 2003/04 to the end of 2007/08.

This report updates the headline figures from the IRMP Action Point with incident statistics for the period between 2014/15 to 2023/24 (10 years of consistent data from the Incident Recording System (IRS)).

In addition to this executive summary, there are 3 further supplemental reports available. These additional reports provide further analysis on:
- **Retrospective incident review** including: comparative mapping for accidental dwelling fires, deliberate dwelling fires, deliberate secondary fires and road traffic collisions
- **Retrospective fatalities and Injuries** including: accidental dwelling fire fatalities and injuries and road traffic collision fatalities and injuries based on 5 years data
- **2023/24 review of activity** including: Operational Preparedness local performance indicators; Operational Response local performance indicators: DR23 Alert to Mobile, TR08 Standard of Fire Cover and DO21 ADF confined to room of origin. Appliance mobilisation counts and temporal incident analysis

5. Methodology

For the purpose of this Summary and Sub Reports the following methodology was applied:
- Incident figures since 2014/15 use the following criteria:
  - Date range is between 01/04/2014 and 31/03/2024.
  - Data was extracted and correct as of **29/04/2024**.
  - The Incident Recording System (IRS) was used as the incident data source. The method for defining data for this report follows certain calculations as prescribed by Communities and Local Government, as well as developing locally derived indicators. These indicators are as follows: DC11, DC12, DC13, RC11, NC12, NI33, TR08, DO21 and DO22
  - Crystal Reports was utilised to filter and extract incident data.
  - This data was filtered into district by MapInfo Professional version 21.
  - Incident data was analysed using Microsoft Office 365 Excel.
- Incident figures from years prior to 1st April 2024 have been refreshed using data obtained from the Incident Recording System (IRS).
- All incident data from stations 13 (Allerton), 24 (West Kirby), 23 (Upton), 40 (Huyton), 41 (Whiston) and 52 (Eccleston) have been reassigned to the current stations for consistency. This is due to these stations being: closed, merged with neighbouring stations or relocated.
- Appliance movement data has been extracted from the Vision mobilisation tables
- Injury data has been extracted from IRS and limited to injuries where 'Victim went to hospital, injury appears serious' and 'Victim went to hospital, injury appears slight'.
- Accidental Dwelling Fire fatality data has been sourced from the Incident Investigation Team (IIT).
- Mapping was completed using MapInfo 21
- Throughout the report(s), Key Stations (or appliances assigned to key stations) have been coloured **Red**. LLAR stations (or appliances assigned to LLAR stations) have been coloured **Green** and Day Crew stations (or appliances assigned to Day Crew stations) are **Blue**.

- Please note that this data is taken from IRS (Incident Recording System). IRS is a live system and therefore there is a possibility that figures contained within this report are subject to change without notification. Figures can change due to Quality Assurance issues, late IRS report submissions and reports delayed due to investigations being under way

6. Executive Summary

In summary the report presents the following findings:
- Between 2014/15 and 2023/24, overall incidents have increased by 3394 (24.4%) as shown in the table below.

Table 1: 10 Year Retrospective of Incidents

Incident Type	2014/15	2019/20	2022/23	2023/24	1 Yr Change	1 Yr % Change	5 Yr Change	5 Yr % Change	10 Yr Change	10 Yr % Change
Accidental Dwelling Fire	1053	868	776	670	-106	-13.7%	-198	-22.8%	-383	-36.4%
Acc Non-Dom Property Fire	218	163	136	158	22	16.2%	-5	-3.1%	-60	-27.5%
Accidental Secondary Fire	450	770	1962	1326	-636	-32.4%	556	72.2%	876	194.7%
Accidental Vehicle Fire	187	206	219	199	-20	-9.1%	-7	-3.4%	12	6.4%
Deliberate Dwelling Fire	210	152	138	136	-2	-1.4%	-16	-10.5%	-74	-35.2%
Del Non-Dom Property Fire	95	73	68	72	4	5.9%	-1	-1.4%	-23	-24.2%
Deliberate Secondary Fire	3927	2772	3291	2372	-919	-27.9%	-400	-14.4%	-1555	-39.6%
Deliberate Vehicle Fire	500	459	288	241	-47	-16.3%	-218	-47.5%	-259	-51.8%
Other Property Fire	229	173	240	176	-64	-26.7%	3	1.7%	-53	-23.1%
AFA - Domestic & Other	2262	3137	3141	3614	473	15.1%	477	15.2%	1352	59.8%
AFA - Non-Domestic	564	570	469	545	76	16.2%	-25	-4.4%	-19	-3.4%
False Alarm Good Intent	1440	1703	2558	2552	-6	-0.2%	849	49.9%	1112	77.2%
Malicious False Alarm	178	233	151	105	-46	-30.5%	-128	-54.9%	-73	-41.0%
Special Service	2036	3191	4465	4393	-72	-1.6%	1202	37.7%	2357	115.8%
Special Service – RTC	581	718	842	765	-77	-9.1%	47	6.5%	184	31.7%
Grand Total	13930	15188	18744	17324	-1420	-7.6%	2136	14.1%	3394	24.4%

- There are 3 incident types that have seen increases over 1000 incidents across the 10 year period. They are: AFA – Domestic & Other (1352), False Alarm Good Intent (1112) and Special Service (2357).
- 2 incident types have seen increases of more than 100%: Accidental Secondary Fire (194.7%) and Special Services (115.8).
- Between 2022/23 and 2023/24, overall incidents have reduced by 1420 (-7.6%).
- Incident types to see increases during 2023/24 include: Accidental Non Domestic Property Fire (22), Deliberate Non Domestic Property Fire (4), AFA – Domestic & Other (473) and AFA – Non Domestic (76). Some of the reductions are: Accidental Dwelling Fire (-106), Accidental Secondary Fire (-636), Deliberate Secondary Fire (-919) and Special Service - RTC (-77) [2].
- Since 2019/20, Accidental Secondary Fires have increased due to a change in reporting, in part due to crews receiving level 1 incident investigation training. This has resulted in improved data.
- During 2023/24, the month with the greatest number of incidents was June (1742). The month with the fewest incidents was February (1152). This means that February saw **66.1%** of June's incidents.
- The hour with the largest number of incidents was between 18:00-18:59 (1309). The hour with the fewest incidents was 06:00-06:59 (255). This means that 18:00-18:59 is **5.1** times busier than 06:00-06:59.
- FireControl received 20,075 calls via 999 lines, answering 97.8% within 10 seconds. This is a 1% improvement on 2022/23.

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[2] Some of these reductions are due to weather. The UK Met Office and Environment Agency publish weekly figures for rainfall (Rainfall and river flow: weekly reports for England - GOV.UK (www.gov.uk). These contain a table showing total rainfall for the previous month, 3 months and 12 months. For the period April 2023 to March 2024, this shows the North West of England had 34% more rainfall than would the long-term average (1600mm to 1200mm).

- In 2023/24, 50 – St Helens saw the most incidents (1552 or 9.0%) while 22 – Heswall saw the least (182 or 1.0%).
- In 2023/24, the busiest appliance assigned/mobilised and attended was M11P1, the least busy was M32P1, the same as last year.
- On average, the appliance spending longest at an incident[3] was M32P1 (29m) and the shortest was M16P1 (17m). When this is analysed for accidental dwelling fires, M14P1 spent the most amount of time (average 1hr 1m), with M18P1 spending the least (average 36m).
- During 2023/24, there was 1 fatality in Accidental Dwelling Fires, 9 fewer than in 2022/23.

7. Retrospective - 2014/15 and 2023/24

7.1 Retrospective Incidents

Chart 1: Overall incidents Attended within Merseyside, by year

10 Year Distribution of Incidents

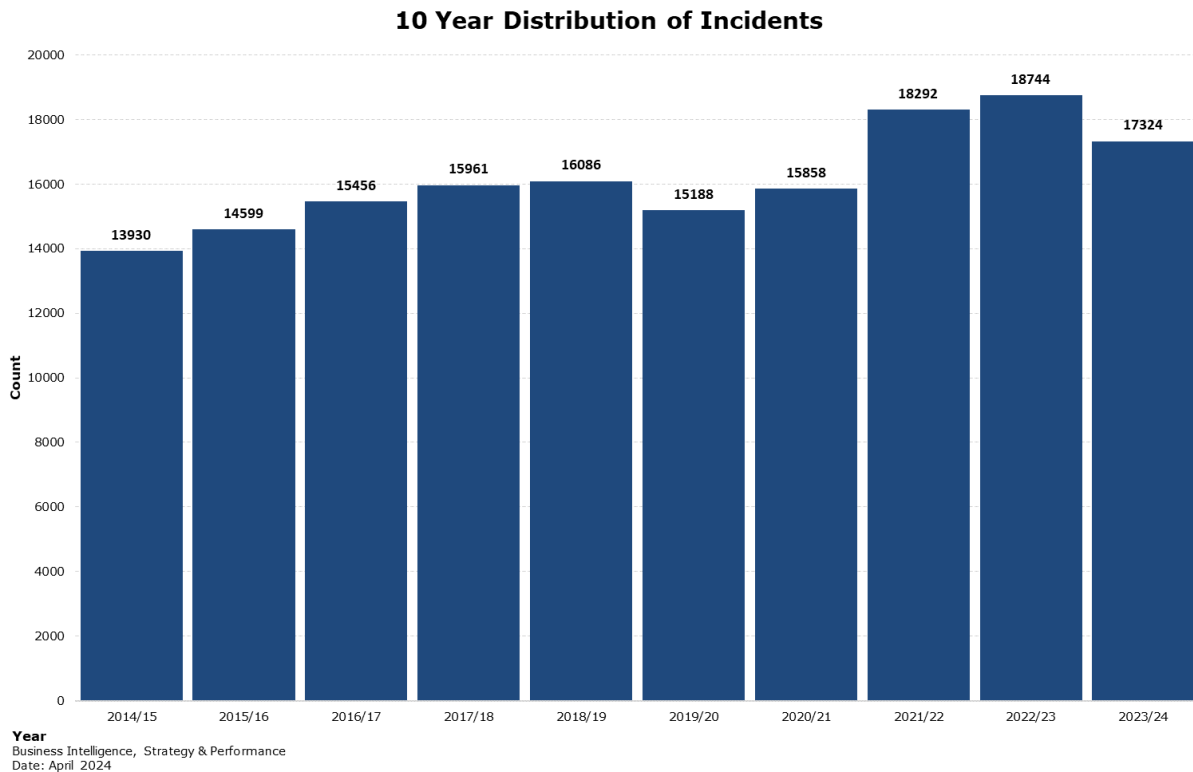Business Intelligence, Strategy & Performance
Date: April 2024

Chart 1 describes that over the 10-year period, there has been an increase of 3394 incidents (24.4%), from 13930 in 2014/15 to 17324 during 2023/24.
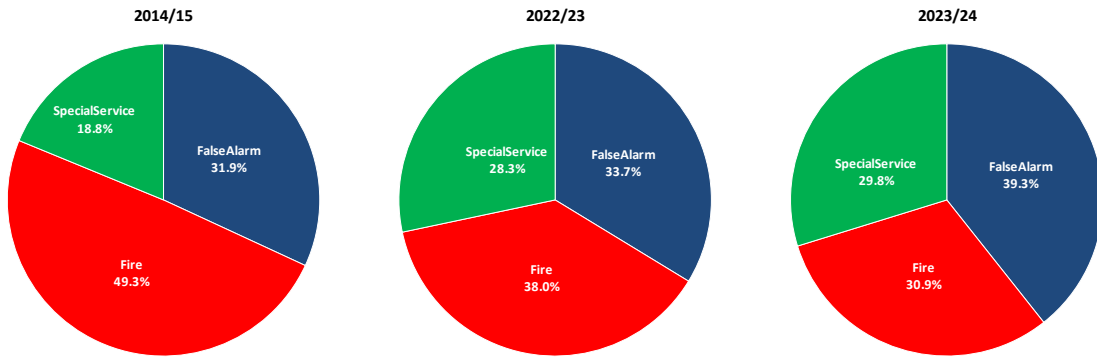
Incidents had been increasing year on year with a slight reduction in 2019/20 before increasing again to 2022/23. In 2023/24, there was a reduction of 1420 incidents (-7.6%), on the previous year.

Between 2014/15 and 2023/24, the average number of incidents was 16144.

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[3] Times have been rounded to the nearest minute

Chart 2: Overall incidents by Category

Comparison of Incidents by Category between 2014/15, 2022/23 and 2023/24

2014/15

SpecialService 18.8%
FalseAlarm 31.9%
Fire 49.3%

2022/23

SpecialService 28.3%
FalseAlarm 33.7%
Fire 38.0%

2023/24

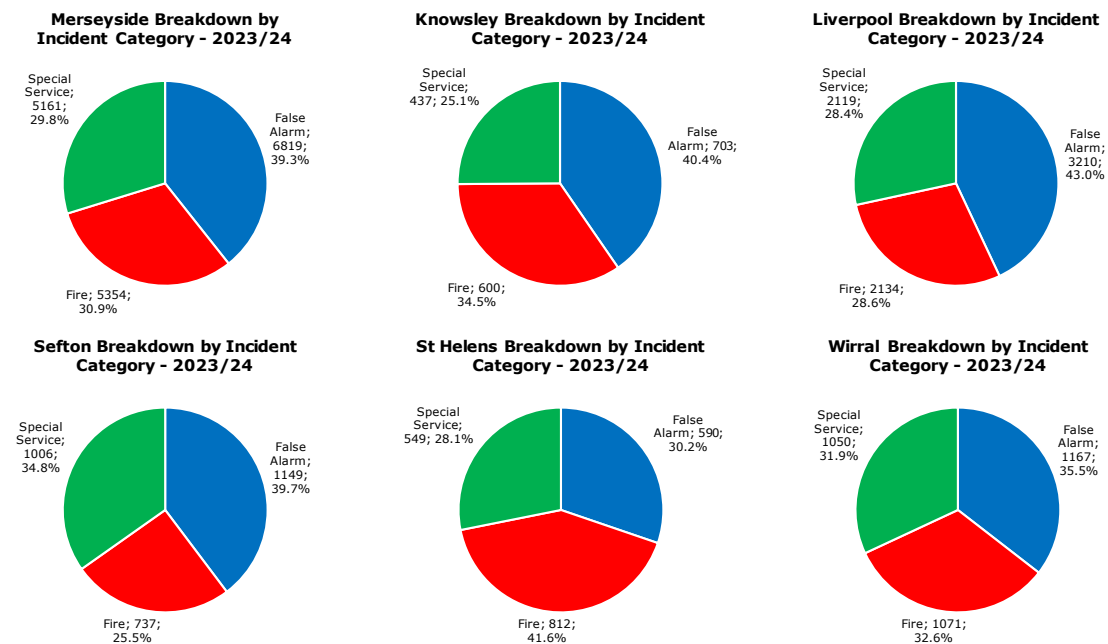SpecialService 29.8%
FalseAlarm 39.3%
Fire 30.9%

Business Intelligence, Strategy & Performance
Date: April 2024

Chart 2 shows the proportional distribution of incidents by category between 2014/15 and 2023/24. This shows that the proportion of incidents classed as Fires have reduced by 18.4% (from 49.3% to 30.9%). False Alarms have increased by 7.4% (from 31.9% to 39.3%) and Special Services have increased from 18.8% to 29.8%.

While false alarms have increased overall in part due to alarms being fitted to new properties when they are built, and an increase in the number of false alarm good intent calls, there has been a significant reduction in AFAs to Non Domestic properties following the introduction of the Unwanted Fire Signal policy in November 2012[4].

Some of the increase in Special Services can be attributed to working closer with partner organisations along with the signing of a Memorandum of Understanding (MoU) with North West Ambulance Service that MFRS will assist in gaining entry to help vulnerable members of the community.

Chart 3: Overall incidents by Category and District during 2023/24

Merseyside Breakdown by Incident Category - 2023/24

Special Service; 5161; 29.8%
False Alarm; 6819; 39.3%
Fire; 5354; 30.9%

Knowsley Breakdown by Incident Category - 2023/24

Special Service; 437; 25.1%
False Alarm; 703; 40.4%
Fire; 600; 34.5%

Liverpool Breakdown by Incident Category - 2023/24

Special Service; 2119; 28.4%
False Alarm; 3210; 43.0%
Fire; 2134; 28.6%

Sefton Breakdown by Incident Category - 2023/24

Special Service; 1006; 34.8%
False Alarm; 1149; 39.7%
Fire; 737; 25.5%

St Helens Breakdown by Incident Category - 2023/24

Special Service; 549; 28.1%
False Alarm; 590; 30.2%
Fire; 812; 41.6%

Wirral Breakdown by Incident Category - 2023/24

Special Service; 1050; 31.9%
False Alarm; 1167; 35.5%
Fire; 1071; 32.6%

[4] The policy can be found here: http://www.merseyfire.gov.uk/aspx/pages/protection/automaticFireAlarms.aspx. This is the final year that false alarms prior to the publication of the UwFS policy will be included.

Chart 3 show the distribution of incidents by top level category (fire, false alarms and special service) across Merseyside and each district during 2023/24. The chart shows that across Merseyside: 39.3% (6819) of incidents were false alarms, 30.9% (5354) were fires and special services account for 29.8% (5161).

Analysing the data at a district level, this shows that incidents in Wirral are the most balanced at close to a third each, whereas those in St Helens are most skewed towards fire incidents (41.6%), followed by Knowsley (34.5%).

Incidents in Liverpool are heavily influenced by false alarms (43.0%) followed by Knowsley (40.4%).

Sefton has the largest proportion of special services (34.8%), while Knowsley have the smallest proportion (25.1%).

7.2 Retrospective Accidental Dwelling Fire Fatalities

Chart 4: Breakdown of Fatalities by Year and District

Fatalities in Accidental Dwelling Fires between 2019/20 and 2023/24

Legend: Knowsley, Liverpool, Sefton, St Helens, Wirral, Grand Total

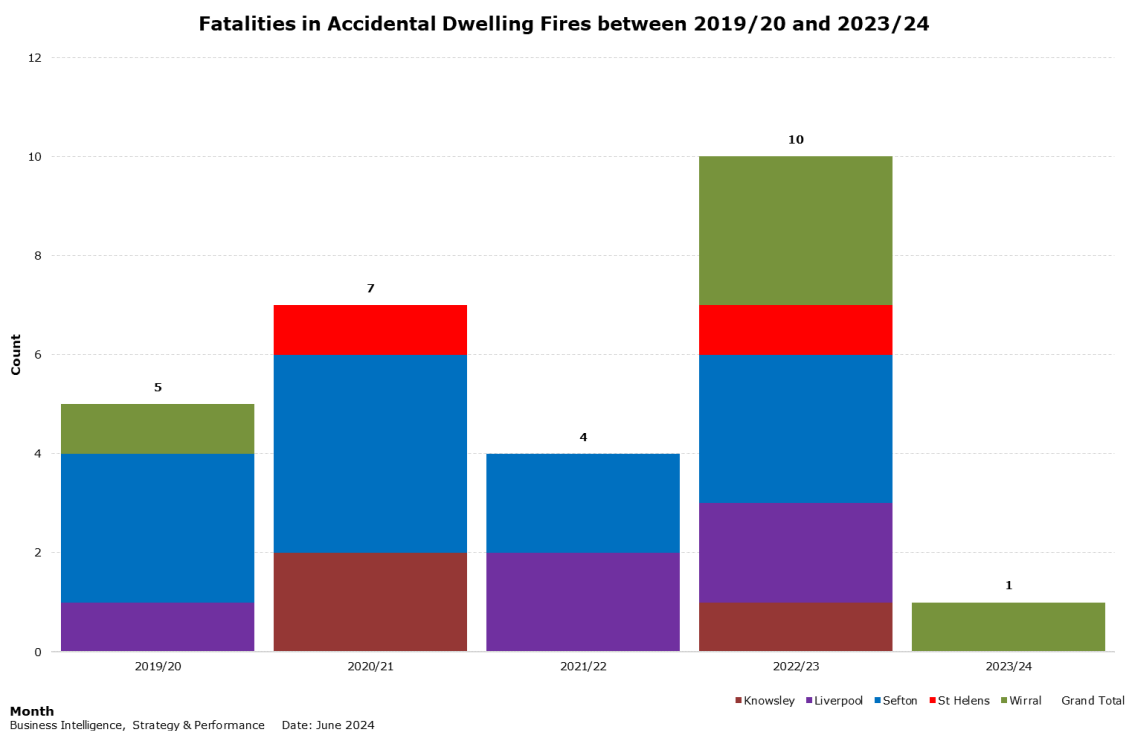Business Intelligence, Strategy & Performance   Date: June 2024

Chart 4 provides a retrospective of fatalities in accidental dwelling fires over the past 5 years. The chart identifies that over this period, fatalities have fluctuated, though have generally increased.

Between 2019/20 and 2020/21, fatalities increased by 2 (5 to 7), before reducing to 4 in 2021/22. 2022/23 saw a large increase to 10 fatalities from accidental dwelling fires, the most since 2015/16 when there were 16. In 2032/24, there was 1 accidental dwelling fire fatality.

8. 2023/24 Review of Performance

8.1 DO22 - Call Handling Performance

FireControl received 20,075 calls on the 999 lines, 97.8% (19,638) were answered within 10 seconds (LPI DO22). This is 1% higher than 2022/23 and a -0.4% reduction on 2019/20.

Narrative	2019/20	2020/21	2021/22	2022/23	2023/24	5 Year Difference
The % of 999 calls answered within 10 seconds	98.2%	98.2%	96.5%	96.8%	97.8%	-0.4%

The month with the best performance was November (99.4% or 1622 out of 1631). The date for the most 999 calls was 5th November (188) followed by 2nd June (155).

8.2 DR23 – Alert to Mobile

In 2023/24 Merseyside Fire and Rescue Service overachieved on the target of 95%; with 95.8% of mobilisations being made in less than 1 minute 54 seconds. This is a 0.4% improvement compared to 2019/20 and a reduction of -0.2% compared to the previous year.

Narrative	2019/20	2020/21	2021/22	2022/23	2023/24	5 Year Difference
Alert to Mobile in under 1m 54 seconds	95.4%	94.4%	95.2%	96.0%	95.8%	0.4%

Fire crews met or exceeded the 95% standard in 10 months with the best performing months being May and July (both 96.5%).

The average time for fire crews to book mobile from being alerted was 57 seconds, 1 second quicker than in 2022/23. The average alert to mobile time varies between 55s in August and 1m 01 seconds in December and February.

8.3 TR08 - Standard of Fire Cover

Overall, the KPI attained 95.9%, a 2% increase on 2022/23 (93.9%). Merseyside Fire & Rescue Service met or overachieved on the expected target of 90% in each month during 2023/24. This is 2.1% on the performance for 2019/20.

Narrative	2019/20	2020/21	2021/22	2022/23	2023/24	5 Year Difference
Attendance Standard - The first attendance of an appliance at all life risk incidents in 10 minutes. Based on Alert to Attendance Times	93.8%	95.3%	95.4%	93.9%	95.9%	2.1%

Analysing appliance times, the average for the 1st appliance to arrive on scene is 5 min 49 seconds (13 seconds faster[5] than 2022/23 - 6 min 02 seconds) and the 2nd appliance was 8 min 36 seconds. The 1st appliance arrived quickest during August (4m 36 seconds) and slowest in February (6m 21 seconds).

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[5] Difference in previous time reported due to data quality

Overall, this equates to an average 7 min 26 seconds (1:36 to process the call and 5:49 to arrive) between a phone call being received and an appliance arriving at the incident[6].

8.4 DO21 - Confinement to Room of Origin

During 2023/24, Merseyside Fire and Rescue Service failed to achieve the target of 92%; with 89.5% of Accidental Dwelling Fires confined to the room of origin. This is 1.1% higher than during 2022/23. This is the 7th year in succession where the target has not been met. This is a 1.9% reduction compared to 2018/19.

Narrative	2019/20	2020/21	2021/22	2022/23	2023/24	5 Year Difference
The % of accidental dwelling fires confined to room of origin.	91.4%	89.0%	86.3%	88.4%	89.5%	-1.9%

There were only 4 months during 2023/24 where MFRS met the target of 92%. These were These months were: April (95.7%), October (92.3%), December (94.8%) and March (93.5%). August was the poorest performing month (84.3%) followed by June (84.8%).

It has been identified that the fall in overall accidental dwelling fires is magnifying the impact of confinement to room of origin failures. Additionally, it has been found that one of the prime reasons for incidents failing to be confined to room of origin is related to fires that have started externally to a property but have then spread to the property itself and damaged the exterior (often with no internal damage). As these fires were not confined to a room in the first instance, they have by default spread beyond the room of origin, but the definition is somewhat misleading.

In a further note: there were 65 accidental dwelling fires where the fire had already gone beyond the room of origin on attendance of MFRS – which means by default the fire was not confined. If these incidents were omitted from the overall figures, then overall performance improves to 98.3%.

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[6] The overall time of 7 min 26 seconds may differ from what is published by the Home Office due to differing methodologies. The Home Office statistics can be found here: https://www.gov.uk/government/collections/fire-incidents-response-times