ystadegau ar gyfer cymru statistics for wales

Statistical Bulletin

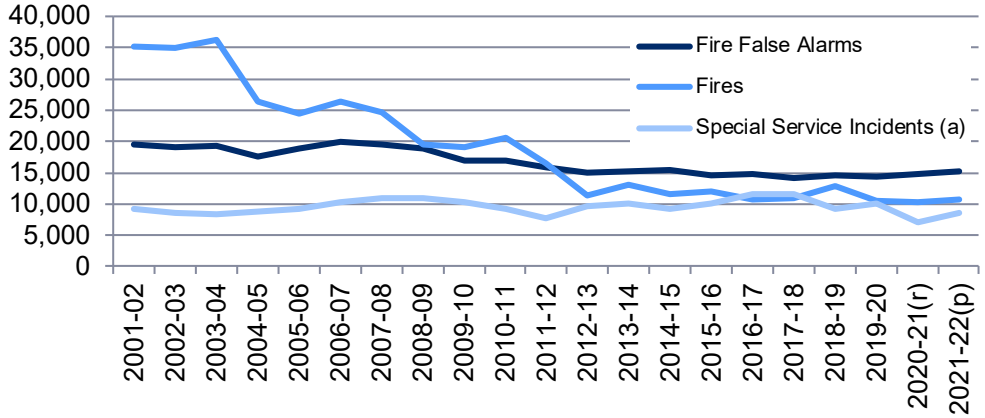
Llywodraeth Cymru Welsh Government

Fire and rescue incident statistics 2021-22

28 Sep 2022
SB 24/2022

Analysis includes details on location, cause, motive, casualties, fire false alarms and Special Service (non-fire) Incidents (SSIs) attended in financial years 2001-02 to 2021-22, where the 2021-22 data are currently provisional.

Chart 1: Number of fire, SSI and fire false alarm attendances



(a) SSIs prior to 2004-05 were collected by the Department for Communities and Local Government. Data from 2004-05 to 2008-09 are taken from the annual Operational data collection; 2009-10 data onwards are taken from IRS. Further details are available in Key Quality information.
(r) Revised data.
(p) Provisional data

- Numbers of fires have seen a downward trend since 2001-02, falling almost 70%, and by 35% over the last 10 years. Recent years have seen less variation with numbers staying around the 10,000 to 13,000 mark. The number of fire false alarms has also fallen but to a lesser extent, only decreasing by 22% since 2001-02. Numbers of SSIs have fluctuated throughout the time series, 2021-22 saw a 24% increase compared with the previous year (chart 1).
- Compared with 2020-21, numbers of fires rose by 4% in 2021-22; numbers of primary fires rose by 4% whilst numbers of secondary fires increased by 5%.
- There were 21 fatal casualties from fires in Wales in 2021-22 (table 8).
- There were 479 non-fatal casualties in 2021-22, an increase of 17% compared with 2020-21 (table 9). All types of casualty e.g. those sent to hospital or people receiving first aid etc. saw increases (chart 21).
- There were 1,820 deliberate grassland woodland and crop fires in 2021-22, an increase of 11% compared with 2020-21.

About this bulletin

The bulletin provides in-depth analysis of all incidents attended by the three Fire and Rescue Authorities (FRAs) in Wales.

The Welsh Government compiles the statistics in this bulletin from reports submitted by FRAs to the Home Office.

This report covers the financial year from April 2021 to March 2022, and comparisons are made with April 2020 to March 2021 a period within the coronavirus (COVID-19) pandemic. Any increase or decrease in numbers should be considered within this context.

In this bulletin

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Fires, Fire false alarms and Special Service Incidents

Fires are classed as primary, secondary or chimney fires.

Primary fires include all fires in non-derelict buildings and vehicles or in outdoor structures, or any fire involving casualties or rescues, or fires attended by five or more appliances.

Secondary fires are mainly outdoor fires including grassland and refuse fires unless they involve casualties or rescues, or are attended by five or more appliances. They include fires in single derelict buildings, derelict road vehicles and derelict outdoor structures.

Chimney fires are reportable fires in occupied buildings where the fire was confined within the chimney structure and did not involve casualties or rescues or are attended by 5 or more appliances.

Fire False Alarms are events in which the Fire and Rescue Authority was called to a reported fire which turned out not to exist.

Special Services Incidents (SSIs) are non-fire incidents attended by Fire and Rescue Authority and include, for example, road traffic accidents, flooding incidents and medical incidents. Further detail is available in the glossary. SSIs may or may not involve fatalities, casualties and rescues.

Incidents attended

In 2021-22 Welsh FRAs attended 34,736 incidents (fires, fire false alarms, SSIs and SSI false alarms), an increase of 8% compared with 2020-21 but a similar number to that in 2019-20 (before the COVID-19 pandemic). This rise is driven by a 24% increase in the number of SSIs. In the previous year SSIs had seen a 31% drop, which was in part likely to be due to the COVID-19 pandemic.

Of all attendances, 10,740 (31%) were at fires, of which 3,943 were primary fires (11% of all attendances), 6,497 secondary fires (19%) and 300 chimney fires (1%). There were also 15,320 fire false alarm incidents (44% of attendances) and 8,676 SSIs including SSI false alarms (25%).

Since 2001-02 all types of fire attendances have fallen; numbers of primary fires falling by 69%, secondary fires by 70%, chimney fires by 67%. Fire false alarms have also fallen but to a lesser extent (dropping by 22%). Numbers of SSIs have varied since 2001-02; overall there has been a decrease of 5% since 2001-02. Further analysis of SSI numbers are shown on pages 35-37.

Whilst there is an overall downward trend in the numbers of fire false alarms and secondary fires, they have been erratic and prone to fluctuation. Analysis on pages 17 to 23 focuses on whether the fire was accidental or deliberate and highlights that the fluctuation in the number of secondary fires is due to those started deliberately.

Table 1: Number of fire, fire false alarm and special service attendances (a)

	False alarms	Primary fires	Secondary fires	Chimney fires	Special Service Incidents	**All attendances**
2012-13	15,088	4,745	5,922	771	9,725	**36,251**
2013-14	15,312	4,790	7,801	578	10,118	**38,599**
2014-15	15,485	4,561	6,541	549	9,289	**36,425**
2015-16	14,491	4,678	6,998	432	10,151	**36,750**
2016-17	14,790	4,757	5,576	417	11,676	**37,216**
2017-18	14,161	4,316	6,301	406	11,584	**36,768**
2018-19	14,485	4,392	8,184	335	9,278	**36,674**
2019-20	14,281	4,279	5,978	330	10,125	**34,993**
2020-21(r)	14,879	3,796	6,197	333	7,020	**32,225**
2021-22(p)	15,320	3,943	6,497	300	8,676	**34,736**
Percentage change 2020-21 to 2021-22	3	4	5	-10	24	**8**

(a) Data for fire false alarms and fires from 2001-02 onwards are available on StatsWales.
(r) Revised data.
(p) Provisional data.

In all three FRAs the largest category of incident type were fire false alarms (over two fifths of attendances); the second largest category is SSIs, although in Mid and West Wales SSIs make up a far larger proportion than in North Wales and South Wales.

Incidents attended in 2021-22, by Fire and Rescue Authority(p):

Chart 2a: North Wales

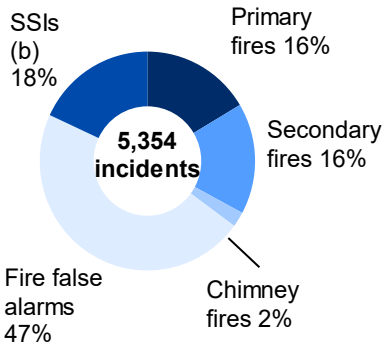


Chart 2b: Mid and West Wales

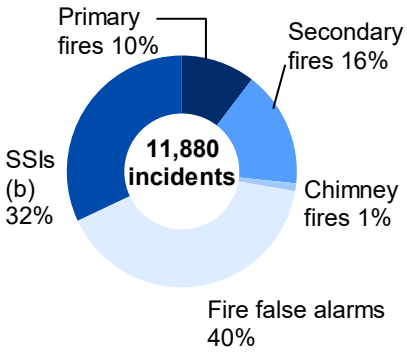
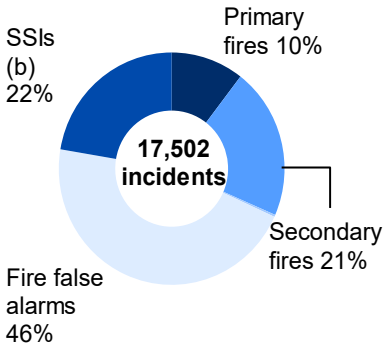


Chart 2c: South Wales (a)



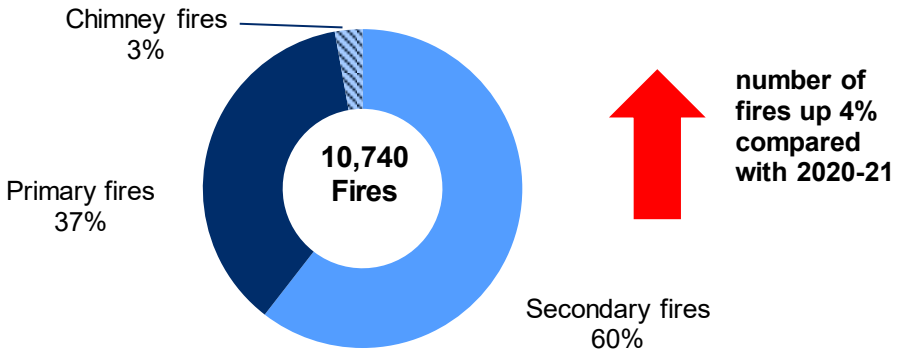
(a) The 50 chimney fires in South Wales equated to less than 0.5% of incidents in the region in 2021-22.
(b) SSI data include numbers of SSI false alarms.
(p) Provisional data.

Fires

In 2021-22 there were 10,740 fires attended in Wales, an increase of 4% compared with 2020-21. Since 2001-02 the number of fires has fallen by 69%.

In 2021-22 secondary fires accounted for 60% of all fires, primary fires accounted for 37% and chimney fires 3%, similar proportions to the previous year.

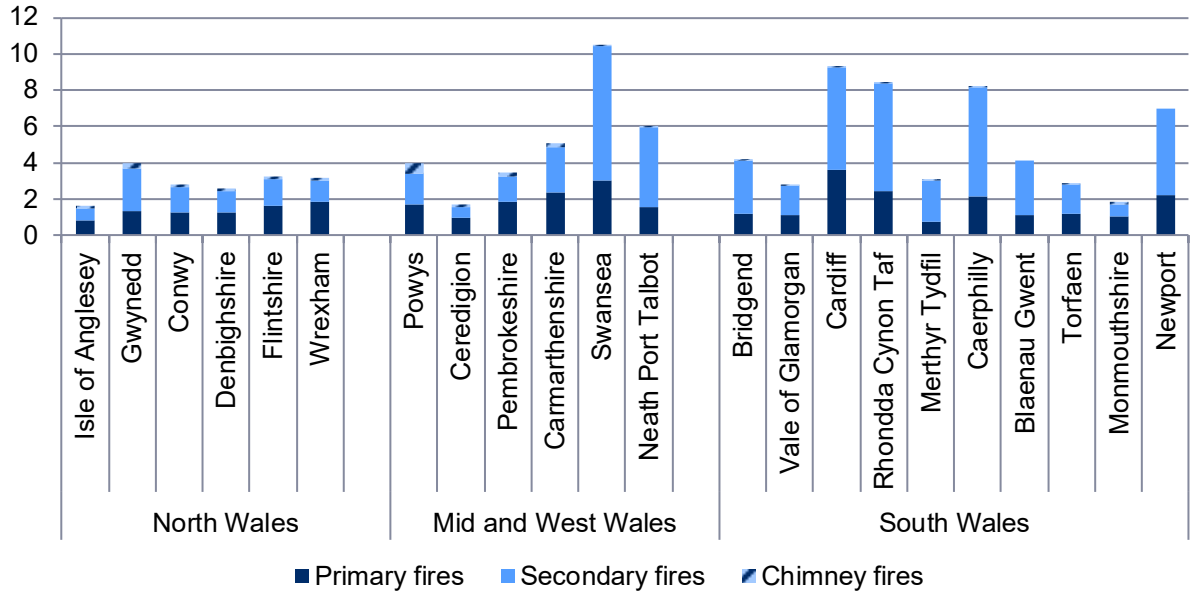
Chart 3: Fires by fire type as a percentage of all fires, 2021-22(p)



(p) Provisional data.

In 2021-22, Swansea had 10% of all fires in Wales, Cardiff had 9% whilst Rhondda Cynon Taf and Caerphilly each had 8%. The lowest proportions were in Isle of Anglesey, Ceredigion and Monmouthshire, each with 2% of fires attended.

Chart 4: Proportion of fires by Local Authority and type of fire, 2021-22(p)



(p) Provisional data

Further data on this topic is available on StatsWales

Fires by type

Primary fires

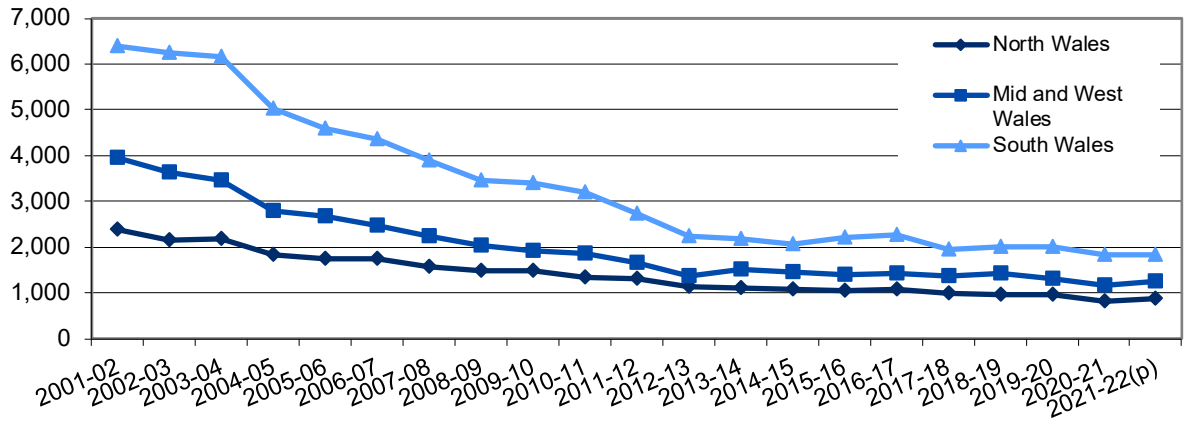
In 2021-22 the number of primary fires increased by 4% compared with the previous year, to 3,943 (the second lowest number in the time series). Only South Wales saw a decrease in the number of primary fires, down 1%; North Wales and Mid and West Wales both saw increases up 9% and 7% respectively.

Table 2: Number of primary fires by Fire and Rescue Authority (a)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	1,144	1,353	2,248	**4,745**
2013-14	1,117	1,498	2,175	**4,790**
2014-15	1,063	1,443	2,055	**4,561**
2015-16	1,049	1,409	2,220	**4,678**
2016-17	1,085	1,411	2,261	**4,757**
2017-18	995	1,362	1,959	**4,316**
2018-19	959	1,422	2,011	**4,392**
2019-20	967	1,300	2,012	**4,279**
2020-21	804	1,155	1,837	**3,796**
2021-22(p)	880	1,237	1,826	**3,943**
Percentage change 2020-21 to 2021-22	9	7	-1	**4**

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(p) Provisional data.

Chart 5: Number of primary fires by Fire and Rescue Authority



(p) Provisional data.

Since 2001-02 all three FRSs have seen substantial falls in the number of primary fires; South Wales has seen a fall of 71%, Mid and West Wales down 69% and in North Wales the number has fallen by 63%. The FRAs in Wales have a number of ongoing fire safety campaigns[1] and community fire safety work (such as home safety checks and school visits) and these may be a contributory factor in the overall falling numbers of fires although no all-Wales evidence is currently

[1] South Wales Fire and Rescue Service
North Wales Fire and Rescue Service
Mid and West Wales Fire and Rescue Service

available. It should be noted that due to the COVID-19 pandemic many of these activities were unable to take place in 2020-21.

The map below shows the high concentration of primary fires in the south Wales region and other urban areas.

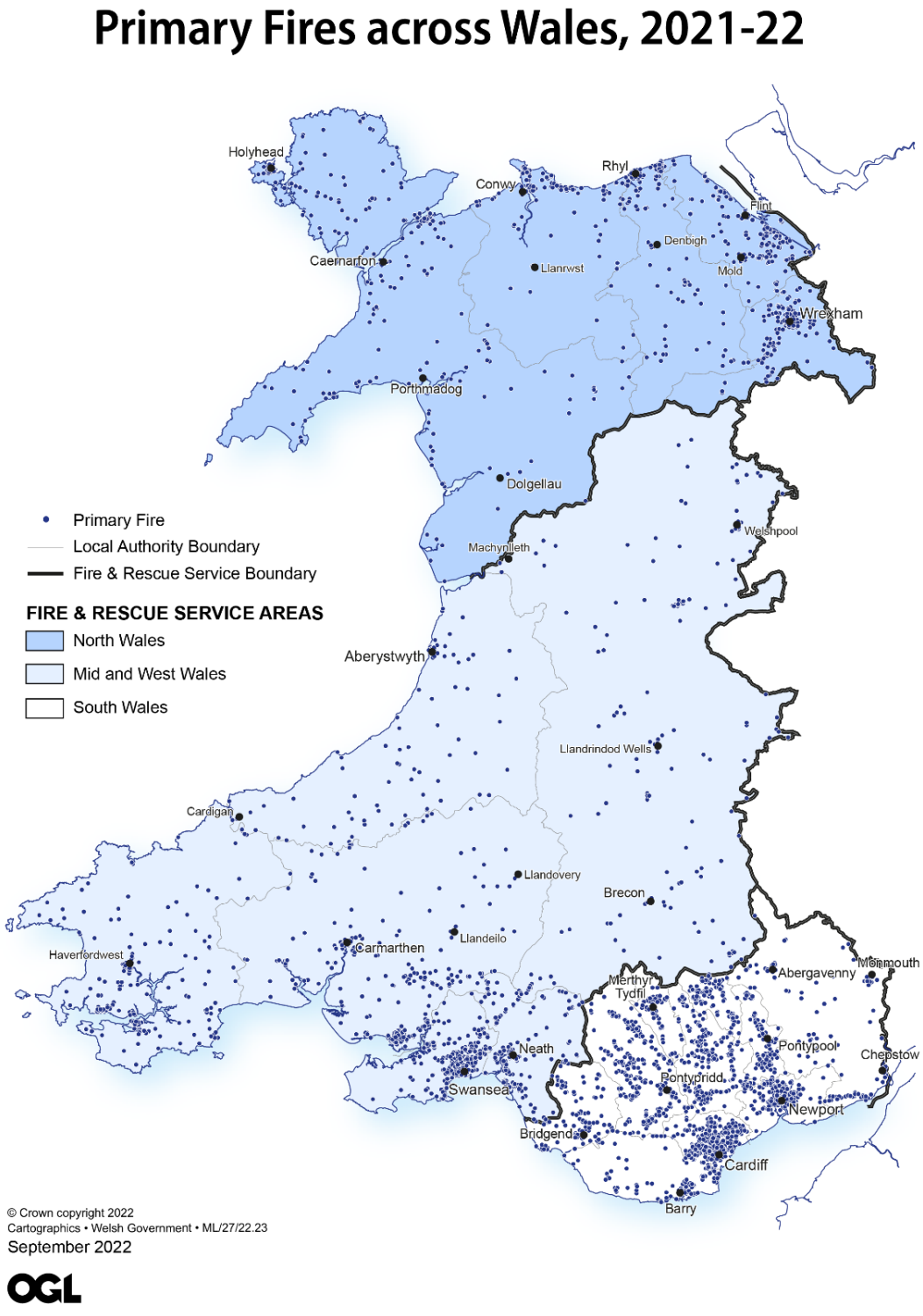


Table 3: Number and percentage of primary fires by location(a)

	Dwellings (b)		Other buildings		Road vehicles		Outdoors	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2012-13	1,911	40	985	21	1,518	32	331	7
2013-14	1,910	40	995	21	1,482	31	403	8
2014-15	1,808	40	1,034	23	1,432	31	287	6
2015-16	1,775	38	963	21	1,573	34	367	8
2016-17	1,858	39	931	20	1,669	35	299	6
2017-18	1,617	37	922	21	1,504	35	273	6
2018-19	1,555	35	881	20	1,485	34	471	11
2019-20	1,628	38	869	20	1,440	34	342	8
2020-21(r)	1,501	40	724	19	1,177	31	394	10
2021-22(p)	1,586	40	804	20	1,218	31	335	8
Percentage change 2020-21 to 2021-22	6	.	11	.	3	.	-15	.

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(b) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(r) Revised data.
(p) Provisional data.
. not applicable

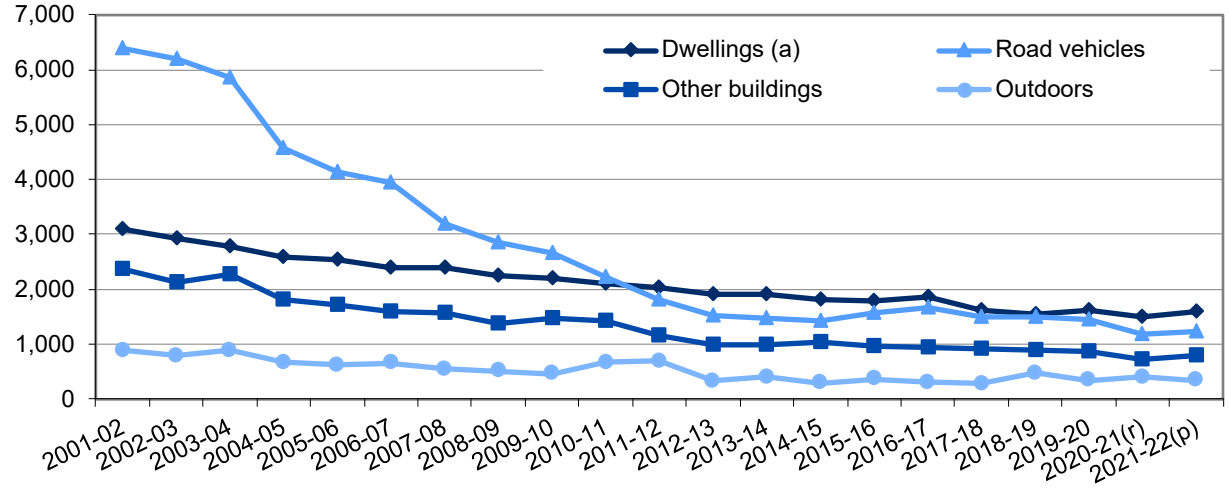
In Wales in 2021-22, 40% of all primary fires were in dwellings, 31% in road vehicles, 20% in other buildings and 8% were outdoor fires. All location types except outdoors saw increases since 2020-21 in the number of primary fires, with fires in dwellings up by 6%, other buildings up 11% and road vehicle fires up 3%. Numbers of primary outdoors fires decreased by 15% following an increase in 2020-21.

In 2021-22 the number of dwelling fires was around half the figure seen in 2001-02 (chart 6). In recent years FRAs have targeted their programmes of Home Fire Safety Checks (HFSCs)[2] at dwellings with identified risk factors (e.g. age, sensory/mobility impairment, domestic violence etc.) In 2021-22 FRAs in Wales completed over 30,000 HFSCs, 83% occurring in properties with at least one risk factor[3].

2011-12 was the first year in the time series in which numbers of primary dwelling fires outnumbered numbers of primary fires in road vehicles in Wales and this has continued to be the case in subsequent years. Numbers of primary fires in road vehicles in Wales have fallen by 80% since 2001-02. More analysis of fires in road vehicles can be found in the section 'Fires by motive' (page17).

[2] Home Fire Safety Check StatsWales tables
[3] For more information on risk factors see the Community Fire Safety data collection form.

Chart 6: Number of primary fires by location



(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(r) Revised data.
(p) Provisional data.

Secondary fires

Secondary fires are the majority of outdoor fires. These secondary fires include grassland and refuse fires unless such fires involve casualties or rescues, property loss or are attended by five or more appliances. They also include fires in single derelict buildings, derelict road vehicles and derelict outdoor structures.

Secondary fires are the most common category of fire attended by Welsh FRAs, accounting for 61% of all fires since 2001-02 and 60% of those attended in 2021-22. Provisional figures show the Welsh FRAs attended 6,497 secondary fires in 2021-22, an increase of 5% on 2020-21. This is the highest number since 2018-19. Compared with the previous year, all 3 FRSs saw increases, in North Wales by 9%, in Mid and West Wales by 8% and in South Wales by 3%.

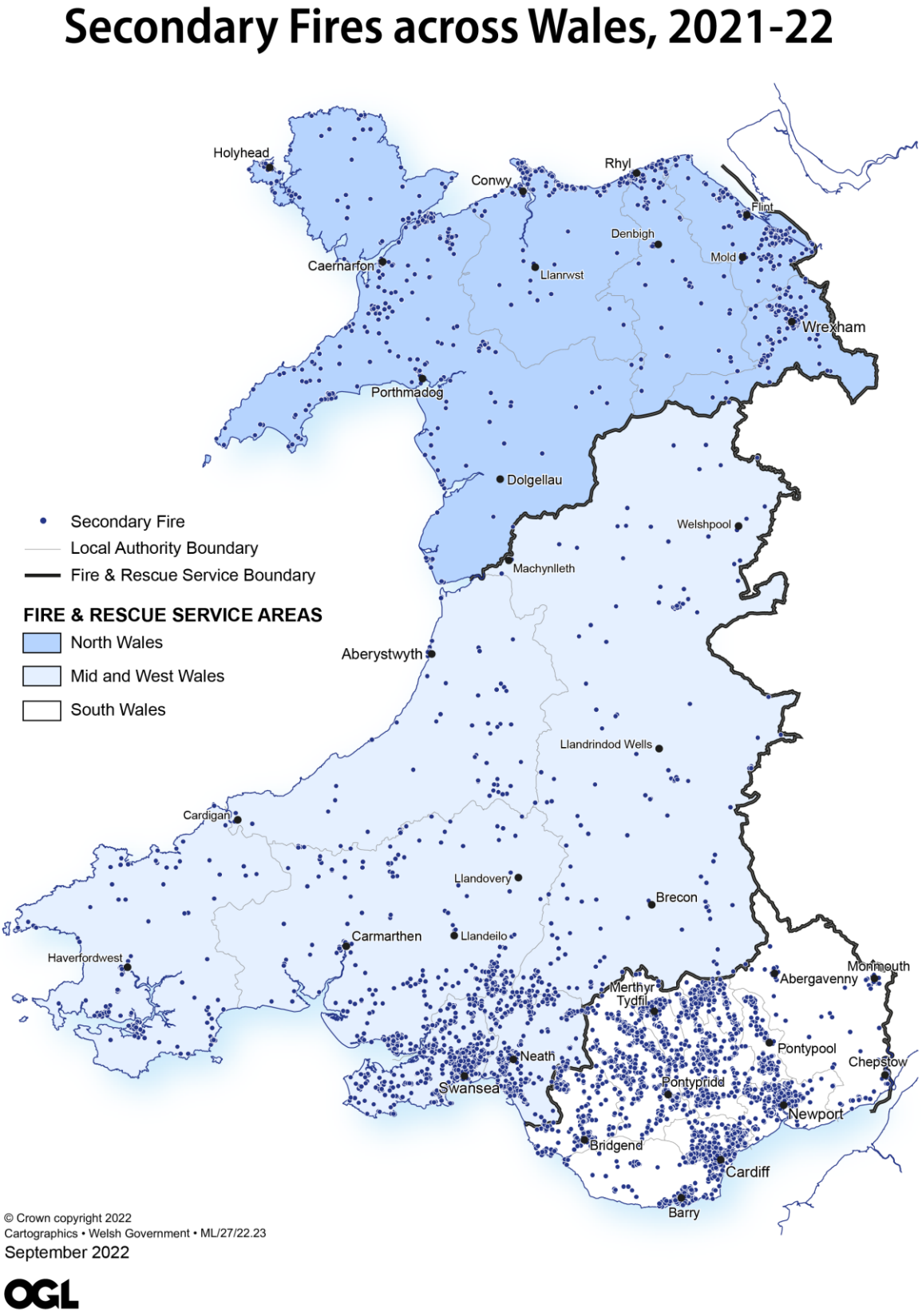
Numbers of deliberate fires are explored in more detail in the section 'Fires by motive' (page 17).

Table 4: Number of secondary fires by Fire and Rescue Authority(a)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	887	1,552	3,483	**5,922**
2013-14	1,087	2,151	4,563	**7,801**
2014-15	964	1,826	3,751	**6,541**
2015-16	918	1,797	4,283	**6,998**
2016-17	779	1,329	3,468	**5,576**
2017-18	893	1,640	3,768	**6,301**
2018-19	1,175	2,170	4,839	**8,184**
2019-20	838	1,705	3,435	**5,978**
2020-21(r)	809	1,790	3,598	**6,197**
2021-22(p)	879	1,928	3,690	**6,497**
Percentage change 2020-21 to 2021-22	9	8	3	**5**

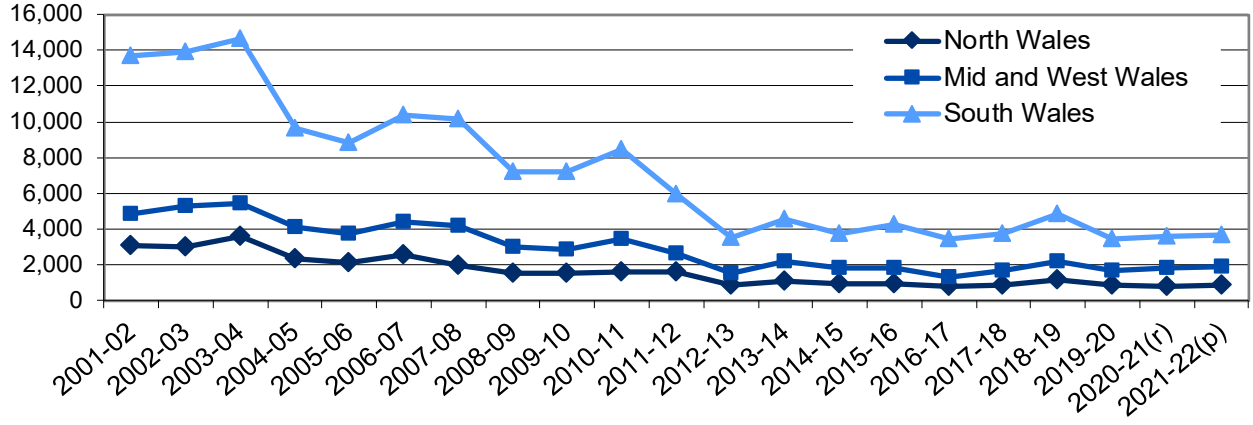
(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(r) Revised data.
(p) Provisional data.

The map below shows the high concentrations of secondary fires, noticeably around Cardiff, Swansea and Newport (which could also be seen in chart 4).



Numbers of secondary fires in all 3 Welsh FRAs have seen substantial falls since 2001-02; 73% in South Wales, by 71% in North Wales and by 60% in Mid and West Wales. In South Wales secondary fires accounted for 66% of fires in the area in 2021-22. In North Wales and Mid and West Wales the proportions were 47% and 59% respectively.

Chart 7: Number of secondary fires by Fire and Rescue Authority



(r) Revised data
(p) Provisional data

In 2021-22, the majority of secondary fires (57%) occurred in South Wales. Mid and West Wales accounted for 30% of all secondary fires and 14% were in North Wales.

Grassland fires: In 2021-22, 2,319 (36% of) secondary fires occurred on grassland, woodland, cropland[4], whilst 47% occurred on 'other land'. The number of grassland fires saw a 13% increase compared with 2020-21; numbers of fires on 'other land' decreased by 5%. The number of these fires is likely to have been influenced by weather conditions; for example, both 2012-13 and 2019-20 saw relatively low numbers of secondary fires in the time series and were the fourth and third (respectively) wettest years since 1862-63. However, not all fluctuations can be explained by the weather. Further analysis using weather data is shown in the section 'fires by motive' (page 17).

Aside from those occurring on grassland, woodland, crops and other land, a further 15% of secondary fires took place in outdoor structures, whilst those in derelict buildings, outdoor machinery and equipment and derelict road vehicles made up a total of 3%.

Refuse fires: In 2021-22, 55% of secondary fires were classed as refuse fires[5]. The number of these fires fell by 1% from 3,605 in 2020-21 to 3,574 in 2021-22. Overall there has been a downward trend in refuse fires, falling by 30% since 2009-10.

As with other outdoor fires, numbers are likely to be affected by weather conditions. Almost 8 in 10 refuse fires in 2021-22 occurred on loose refuse. A number of campaigns including 'Drive your litter home[6]' and 'Fly Tipping Action Wales[7]' are attempting to address the issues of litter and fly-tipping. In 2020-21, the number of fly-tipping incidents (recorded by local authorities) in Wales increased by

[4] Data on grassland, woodland and crop fires can be found in StatsWales table Primary and secondary grassland, woodland and crop fires by month and financial year
[5] Data on refuse fires can be found in StatsWales table 'Fires by detailed location and motive'
[6] Keep Wales tidy – drive your litter home
[7] Fly-tipping Action Wales

22% compared with the previous year, this is the highest number of incidents since 2010-11 but is 25% lower than in 2006-07; loose refuse fires in 2021-22 increased by 12%.

Keep Wales Tidy is also aiming to prevent litter from occurring through education and awareness raising via the Eco-schools programme[8]. This is an international initiative which encourages pupils to engage with environmental and also sustainable development issues.

More Data on fly-tipping in Wales can be found on the Statistics and Research website and in StatsWales tables.

Chimney fires

Chimney fires are any fire in an occupied building where the fire was confined within the chimney structure (and did not involve casualties or rescues or attendance by five or more appliances).

During 2021-22, there were 300 chimney fires in Wales, a decrease of 10% compared with 2020-21, the lowest number in the time series. Most of these fires occurred in dwellings (97%).

Only North Wales FRA saw a decrease in the number of chimney fires, of 24%; Mid and West Wales and South Wales both saw numbers increase by 2% compared with the previous year (as shown in table 5).

Table 5: Number of chimney fires by Fire and Rescue Authority (a)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	319	340	112	**771**
2013-14	212	265	101	**578**
2014-15	217	220	112	**549**
2015-16	173	186	73	**432**
2016-17	151	197	69	**417**
2017-18	141	197	68	**406**
2018-19	145	142	48	**335**
2019-20	145	146	39	**330**
2020-21	157	127	49	**333**
2021-22(p)	120	130	50	**300**
Percentage change 2020-21 to 2021-22	-24	2	2	**-10**

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel table.
(p) Provisional data.

[8] Keep Wales Tidy – Eco schools

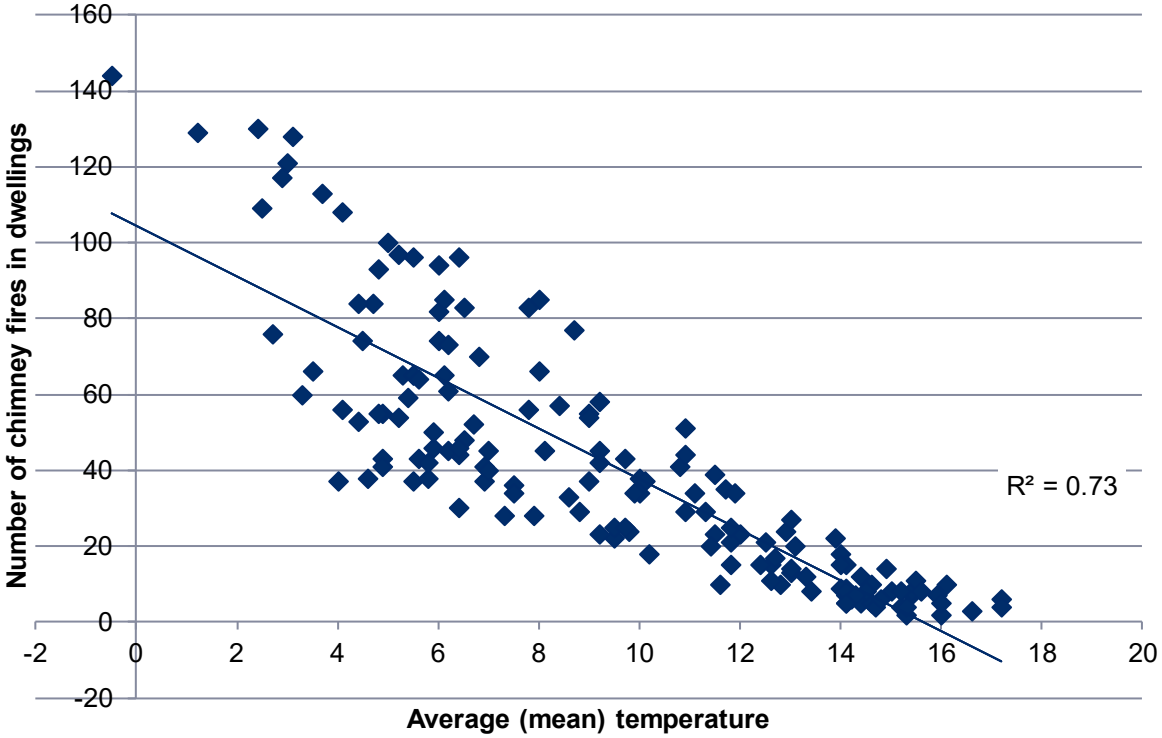
Statistical analysis of chimney fire and temperature data

Since there appears to be a link between the mean temperature and the number of chimney fires, it is worth investigating this relationship further by looking at the statistical correlation between the two datasets.

The correlation coefficient, denoted by 'R^2', tells us how closely data in a scatterplot fall along a straight line. The R^2 value ranges from 0 to 1, the closer the value is to 1 the stronger the relationship. A value close to 0 implies no relationship.

The scatter plot below shows how closely the relationship between the temperature data and chimney fire numbers are correlated. The data in the chart shows the monthly mean temperature plotted against the number of chimney fires (in dwellings) seen in that month for the years 2009-10 to 2021-22. The R^2 value of 0.73 indicates a strong correlation in the data which is also intuitive, that in colder months the FRAs are required to attend more chimney fires. The graph also shows a tighter cluster of data points around the higher temperatures and getting looser as the temperature falls. This suggests that as it gets colder considerations other than the temperature (e.g. poverty, environmental concerns, availability of fuel etc.) may also factor in whether a householder lights a fire in their home.

Chart 8a Scatter plot showing statistical correlation between numbers of chimney fires in dwellings and mean temperature

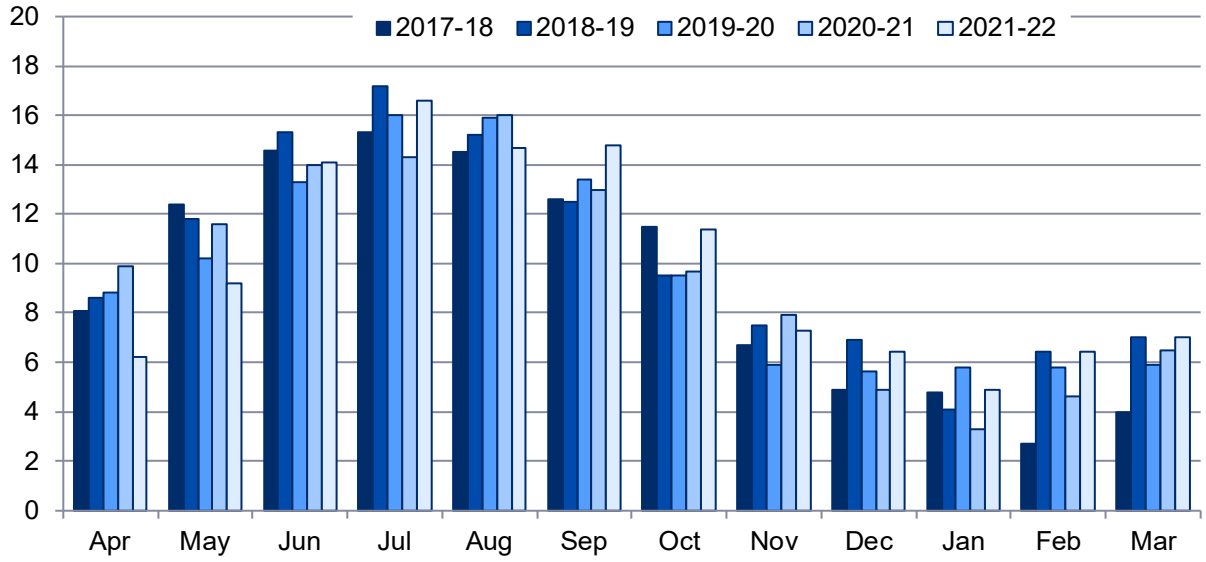


Source: Mean temperature data from the Met Office

This relationship can also be seen by comparing monthly data for chimney fires and mean temperatures.

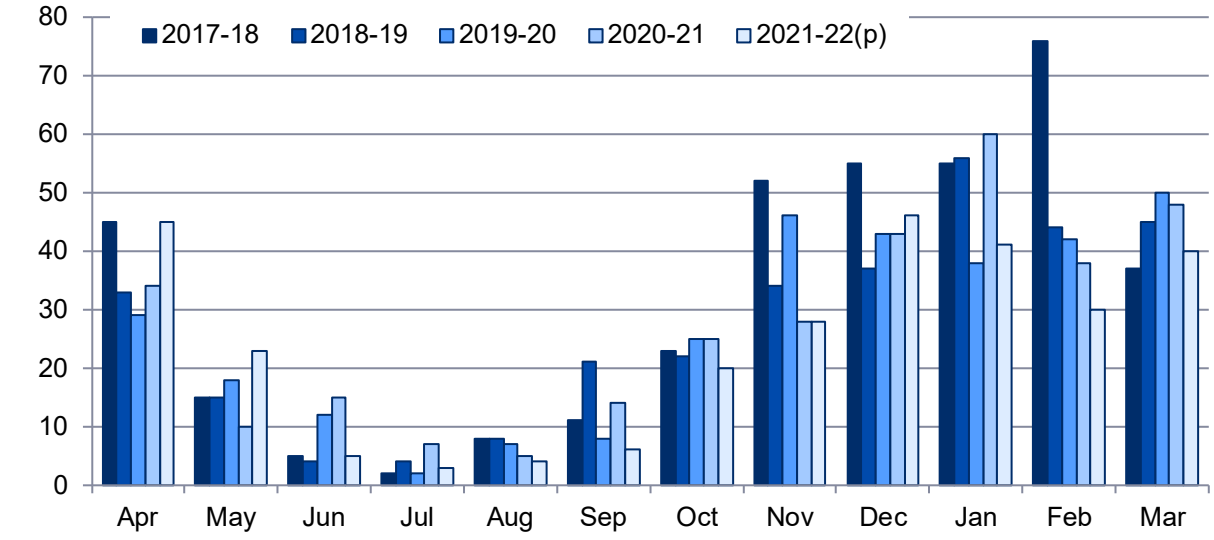
As might be expected, the number of chimney fires in dwellings is higher in the winter and colder months, for example in the charts 8b and 8c we see that Feb 2018 is the coldest month in the chart and has the most chimney fires. For 2021-22 April and May were comparatively cold months (comparing with April and May in previous years) and had relatively high numbers of chimney fires. For most of the rest of the year temperatures were comparatively warmer and fewer chimney fires were attended. Whilst the pattern does not hold for all months, further examples can be seen throughout the time series.

Chart 8b: Mean temperature by month



Source: Met Office[9]

Chart 8c: Number of chimney fires in dwellings by month



(p) Provisional data

Further data on this topic is available on StatsWales.

[9] Met Office datasets

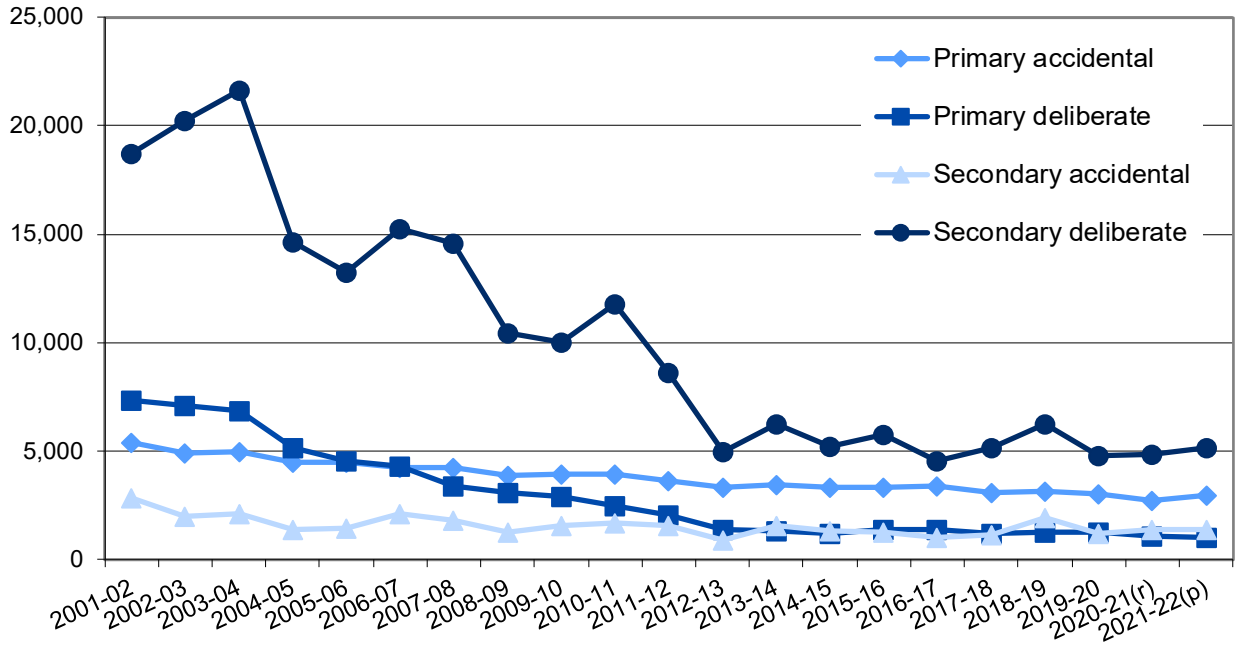
Fires by motive

This section looks at motive, in particular whether fires were caused accidentally or deliberately. Accidental fires are defined as fires where the fire was ignited by accident or the cause of the fire is not known or unspecified. Deliberate fires are defined as fires where the fire was ignited deliberately or if it is suspected or recorded as 'doubtful' by the FRA.

In 2021-22 57% (6,122) of fires were recorded as deliberate; this is less than a quarter of the number seen in 2001-02 although an increase of 4% compared with 2020-21. There were 4,618 accidental fires (including chimney fires); also a 4% increase compared with 2020-21.

The chart below shows that numbers of deliberate secondary fires have been prone to fluctuation, whilst the other categories shown are less volatile.

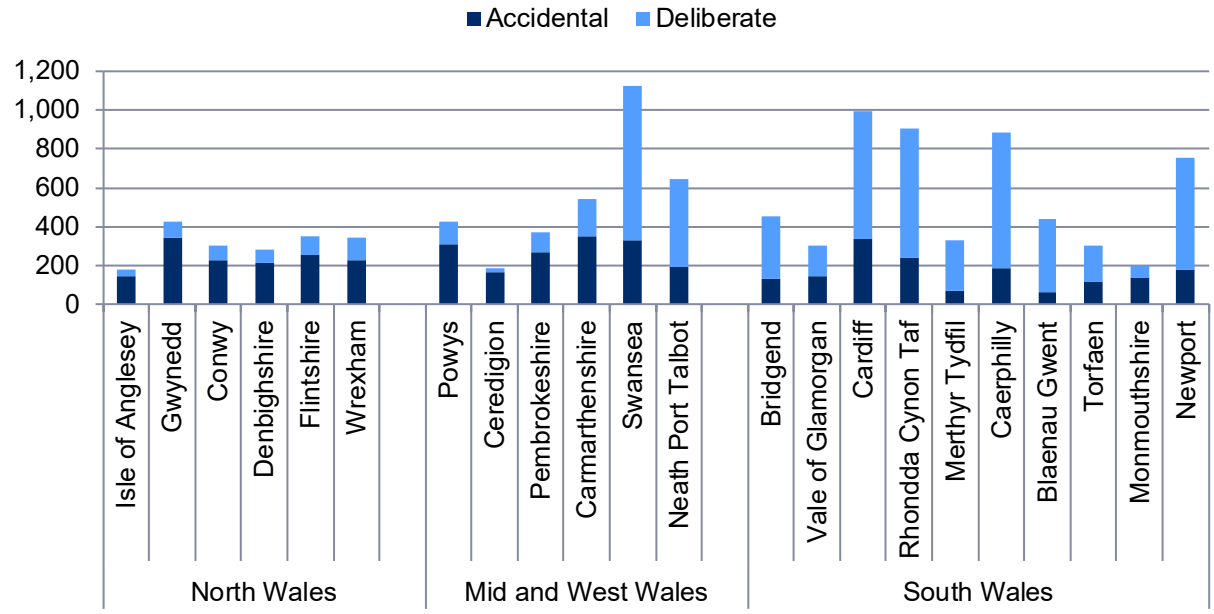
Chart 9: Number of fires by type and motive



(r) Revised data.
(p) Provisional data.

Chart 10 shows that in those local authorities with high numbers of fires (Cardiff, Swansea, Newport, Rhondda Cynon Taf and Caerphilly), a large proportion were started deliberately.

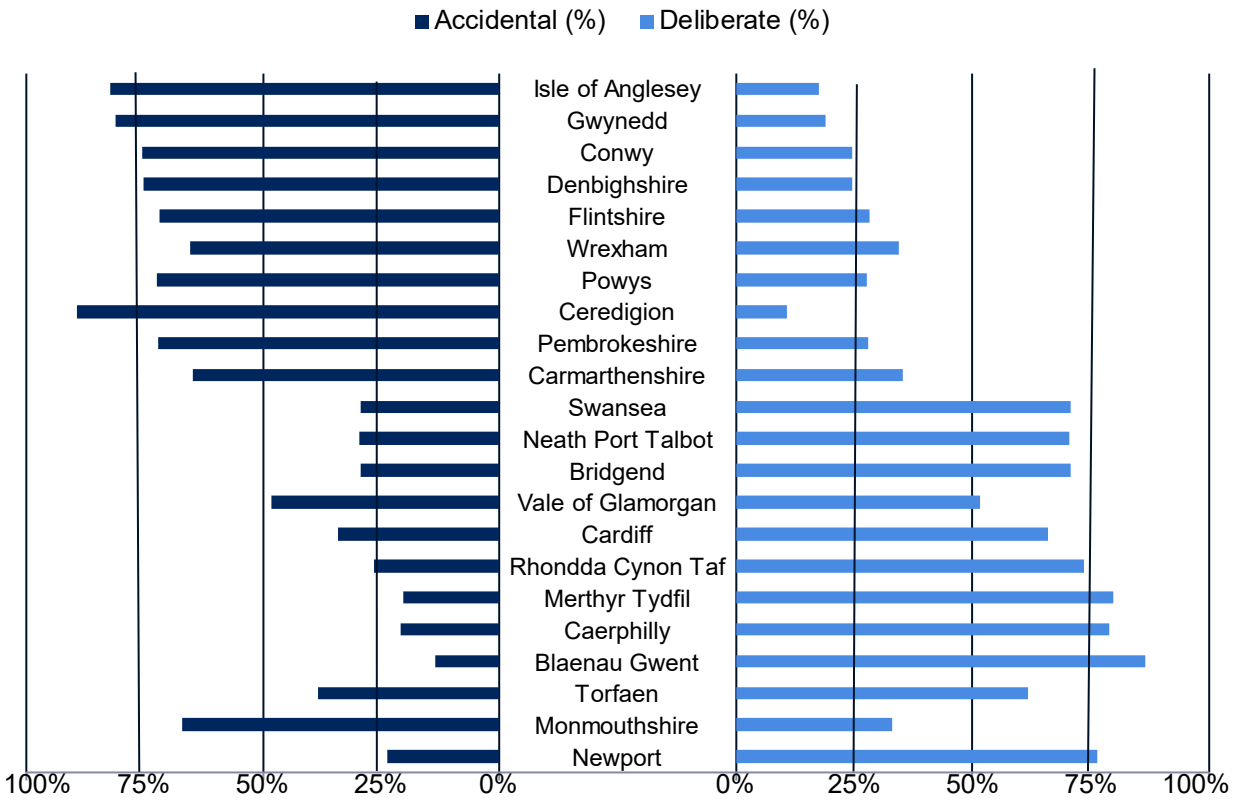
Chart 10: Number of accidental and deliberate fires by Local Authority 2021-22(p)



(p) Provisional data

Chart 11 further shows that in 4 local authorities (Blaenau Gwent, Newport, Merthyr Tydfil and Caerphilly) 75% or more of fires were started deliberately, (where Blaenau Gwent has the highest percentage at 86%). The local authorities with the lowest percentage of fires started deliberately were Ceredigion (11%), Isle of Anglesey (18%) and Gwynedd (19%).

Chart 11: Percentage of accidental and deliberate fires by Local Authority 2021-22(p)



Accidental fires

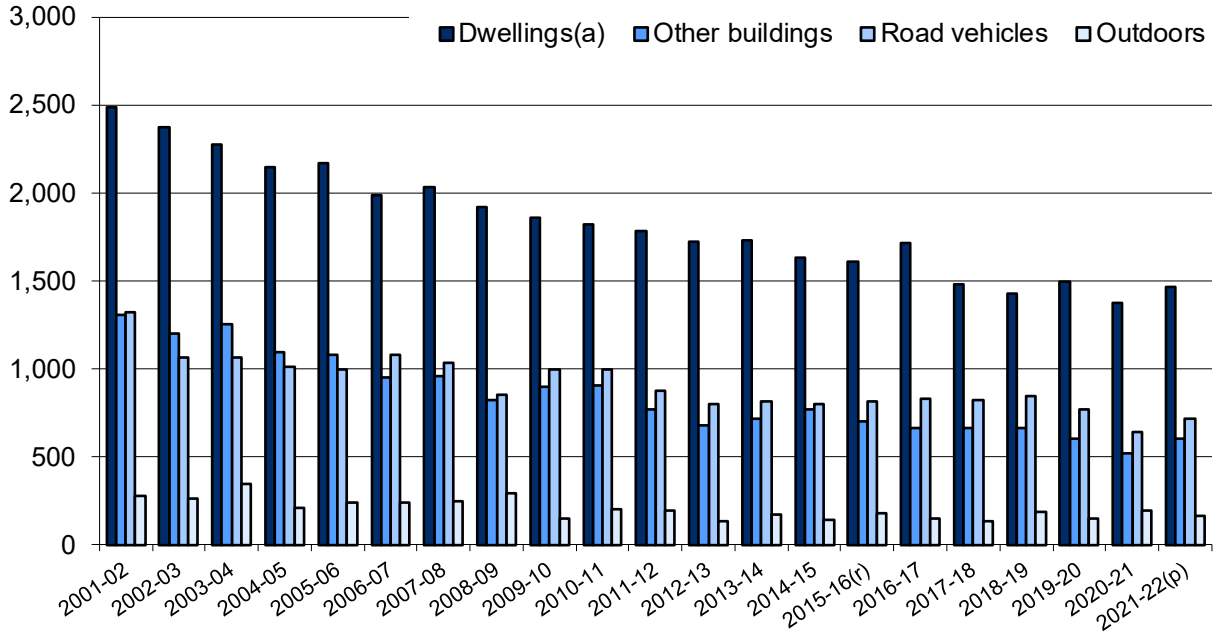
In 2021-22, there were 4,618 accidental fires, this is the third lowest number in the available time series (since 2001-02) and directly follows the years with the lowest and second lowest numbers. The number rose by 4% compared to the previous year (equating to 174 more accidental fires), however since 2001-02 the number has fallen by 50%. Accidental fires accounted for 43% of all fires attended in 2021-22, around the same proportion as in earlier years. 75% of all primary fires and 21% of secondary fires were accidental. Almost all (99%) chimney fires in 2021-22 were accidental. More data on accidental fires can be found on StatsWales.

In 2021-22 the number of accidental primary fires increased by 8% whilst there was no change in the number of accidental secondary fires (compared with 2020-21).

A large proportion of accidental primary fires occur in dwellings, equating to between 46% and 52% for each year since 2001-02. The number of accidental dwelling fires rose by 7% to 1,466 in 2021-22; this is the third lowest in the time series (as can be seen in chart 12). Since 2001-02 numbers of accidental dwelling fires have fallen by 41%. Most dwelling fires (92%) started accidentally in 2021-22, similar to the proportion seen in recent years but more than 10 percentage points higher than in 2001-02.

Since 2001-02 the number of accidental fires in road vehicles has fallen by 46%, and in 2021-22 the number rose by 12% (compared with the previous year).

Chart 12: Number of accidental primary fires by location



(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

In 2021-22 all 3 FRAs saw an increase in the number of accidental primary fires in dwellings compared with the previous year, as shown in table 6. North Wales had the largest percentage increase (11%) whilst Mid and West Wales saw a rise of 10% and South Wales a 1% rise.

Table 6: Number of accidental primary fires in dwellings by Fire and Rescue Authority(a)(b)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	455	525	745	**1,725**
2013-14	479	572	681	**1,732**
2014-15	401	579	655	**1,635**
2015-16	385	542	682	**1,609**
2016-17	433	595	691	**1,719**
2017-18	386	532	567	**1,485**
2018-19	327	528	575	**1,430**
2019-20	356	461	681	**1,498**
2020-21	360	410	605	**1,375**
2021-22(p)	399	453	614	**1,466**
Percentage change 2020-21 to 2021-22	11	10	1	7

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(b) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

More than 3 in 10 accidental dwelling fires occurred between the hours of 6pm and 10pm[10]. Analysis from page 43 to 47 relates to cause and source of ignition and shows that, cooking appliances were the main source of ignition, being responsible for almost half of the accidental dwelling fires in 2021-22. In 9% of accidental dwelling fires alcohol or drugs were recorded as a contributory factor to the start of the fire.

There was a 17% decrease in primary accidental outdoor fires from 196 in 2020-21 to 163 in 2021-22; 40% of these fires occurred in Mid and West Wales, 36% occurred in South Wales, and 25% in North Wales.

Deliberate fires

Over the years there have been a number of national programmes for dealing with deliberate fires. The Wales Arson Reduction Strategy (WARS) first reported in 2007, with a review in 2009, and updated strategies for 2012-15 and most recently 2019[11]. A delivery plan from WARS III resulted in a multi-agency taskforce 'Operation Dawns Glaw' being established in 2015 and aiming to reduce the number of deliberate grassland fires.

The original WARS report noted that vehicle crime had continued to fall, and reflected that vehicles are designed and built more securely. According to police recorded crime data[12] (not currently National statistics) for Wales, offences against vehicles fell by 82% and thefts of vehicles fell by 79% between 2002-03 and 2021-22. In 2021-22 there was a 13% increase in thefts of vehicles and

[10] Data on time of accidental dwelling fires can be found in the StatsWales table 'Fires and casualties by time'
[11] Wales Arson Reduction Strategy
[12] Police Recorded Crime Open data tables

a small (less than 1%) increase in all vehicle offences. It is likely that the COVID-19 pandemic had an impact on numbers of these offences in 2020-21 and part of 2021-22. Deliberate primary fires in road vehicles have seen some fluctuation in recent years; in 2021-22 there was a 6% decrease compared with 2020-21, the third consecutive annual decrease, to the lowest figure in the timeseries.

Ongoing targeted programmes continue, for instance the South Wales FRA Bernie campaign which specifically targets primary school children to engage with and educate them on the potential consequences of deliberately setting grass and mountain fires. In 2019 the three Welsh Fire and Rescue Services came together and designed a character named Sbarc that educate children and members of the public on key messages of Prevention, Detection and Escape and Arson Reduction.

Further information on Arson reduction strategies and programmes can be found on the FRA's websites:

North Wales FRA - Arson Reduction

Mid and West Wales FRA - Reducing Arson

South Wales FRA - Fire setting Intervention scheme and Deliberate fires

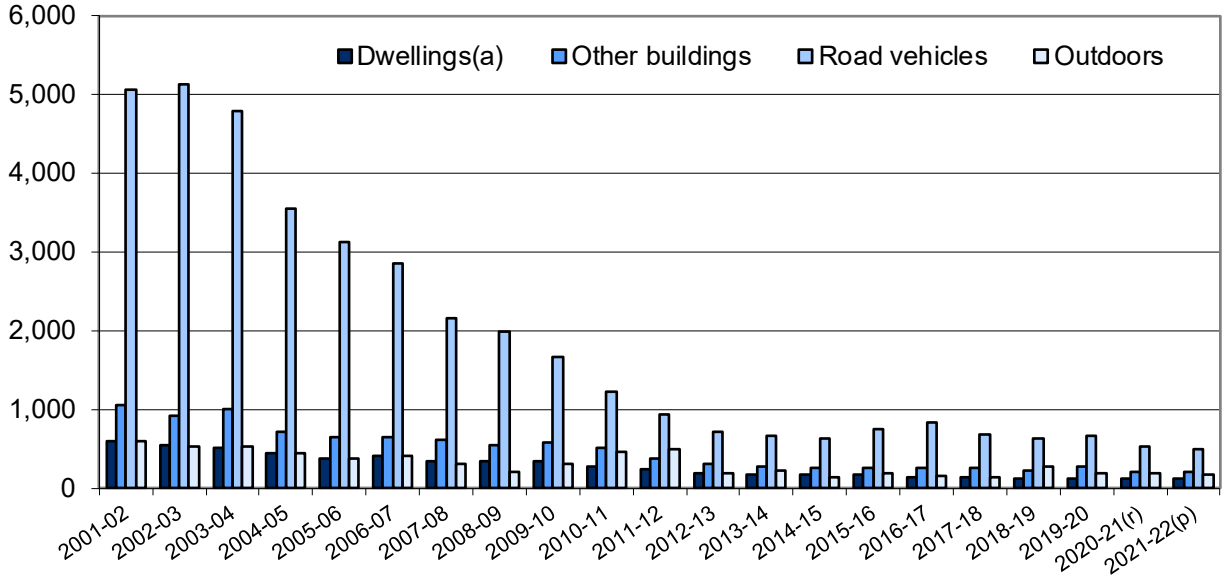
Work has also been done to inhibit the spread of fires; Natural Resources Wales has examined how changes in land and forestry management methods can be used to make grasslands less conducive to fires or be better structured to control the spread of fires and firefighters have also been involved in developing firebreaks on some of our valleys' hillsides, using the latest techniques learned internationally. The Healthy Hillsides project is a Welsh Government-funded partnership programme designed to reduce the impact of wildfires across the South Wales Valleys. This is a collaborative project, bringing together Natural Resources Wales, along with South Wales Fire and Rescue Service, Rhondda Cynon Taf Council and the Wildlife Trust for South and West Wales.

There were 993 deliberate primary fires in 2021-22, the lowest figure in the time series and the third consecutive annual decrease. The 2021-22 figure is 6% lower than in 2020-21 and 86% lower than in 2001-02. Deliberate primary fires accounted for a quarter of all primary fires in 2021-22.

Grassland, woodland and crop fires continue to be a focus of many of these programmes. In 2021-22 there were 1,820 deliberately set grassland fires, a rise of 11% compared with 2020-21. Of these 1,820 fires, 95% were secondary fires.

While half of all deliberate primary fires in 2021-22 occurred in road vehicles, the numbers of such fires have reduced substantially since 2001-02 (by 90%).

Chart 13: Number of deliberate primary fires by location



(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

In 2021-22, there were 5,127 deliberate secondary fires, an increase of 6% on the previous year. This equates to 79% of secondary fires being set deliberately.

53% of all deliberate secondary fires were classed as 'Other outdoors (including land)' in 2021-22, 3 percentage points fewer than in 2020-21 although there was only a 1% change in the number. The majority of these fires (93%) occurred on loose refuse.

Table 7: Number of deliberate secondary fires by location(a)

	2017-18	2018-19	2019-20	2020-21(r)	2021-22(p)
Derelict building	100	71	97	69	88
Derelict road vehicle	43	36	22	15	24
Outdoor	5,031	6,155	4,673	4,743	5,015
Grassland, woodland and crops	1,588	2,686	1,604	1,520	1,721
Outdoor structures	654	574	575	490	587
Outdoor equipment and machinery	10	4	5	7	8
Other outdoors (including land) (b)	2,779	2,891	2,489	2,726	2,699
All deliberate secondary fires	**5,174**	**6,262**	**4,792**	**4,827**	**5,127**

(a) Fires in non-derelict buildings, non-derelict road vehicles and non-derelict transport vehicles are primary fires.
(b) Other outdoors includes the following locations: loose refuse, river/canal, lake/pond/reservoir, sea, road surface/pavement, railway, airfield/runway, cycle path/public footpath/bridleway, cemetery, park, beach, landfill site, wasteland, mines and quarries (excluding buildings above ground), golf course, playground (excluding equipment)/recreational area.
(r) Revised data.
(p) Provisional data.

Fires on grassland, woodland or crops accounted for 34% of deliberate secondary fires in 2021-22 and numbers of these fires rose by 13% compared with the previous year.

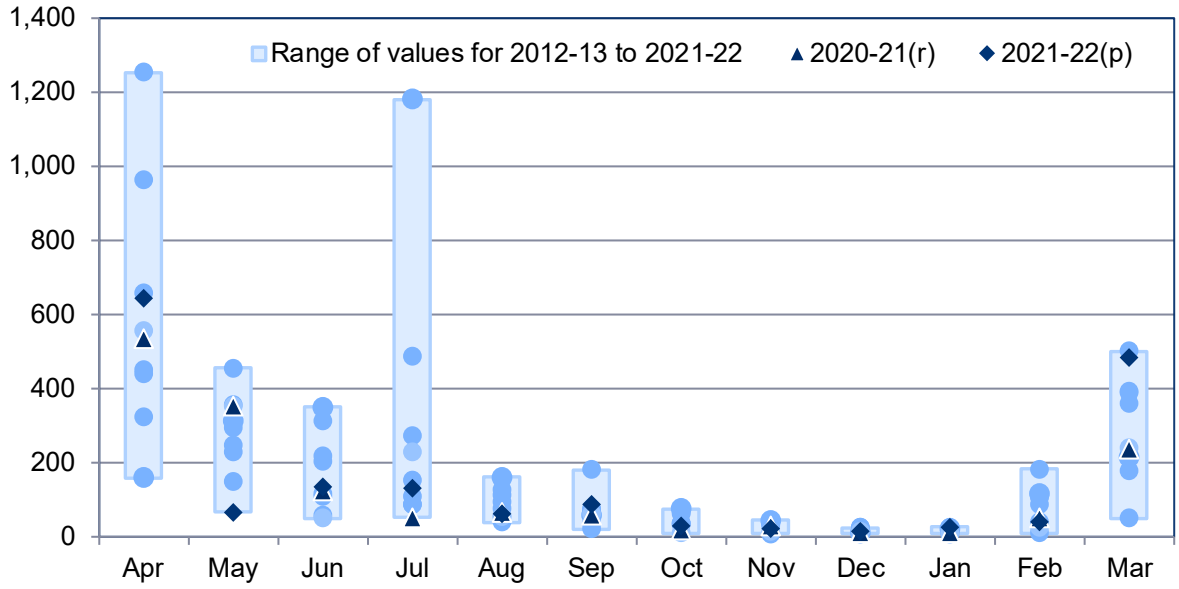
Chart 14 shows the usual peaks for these fires tend to occur in March, April and May, However May 2021 (in the financial year 2021-22) saw far fewer than May in previous years, a fall of 82% compared with May 2019. March 2022 saw more than double the number of these fires in March 2021, an increase of 249 fires to the highest figure since 2012-13; April 2021 also saw an increase, of 21%. April 2021 and March 2022 accounted for almost two thirds of the deliberate secondary

fires on grassland, woodland and crops. The chart shows the numbers for these months can be variable, and this may be due to a number of factors, including weather and the date on which Easter falls.

The Met Office data shows that in March 2022 there was almost half the level of rainfall than in March 2021, and the least amount since March 2012 (when there were over 900 deliberate secondary fires on grassland, woodland and crops). Similarly, April 2021 also saw less rainfall (a drop of 47%) and was the driest April since 1984, however the number of fires did not show the same level of increase as in March 2022. May 2021 was the wettest on record (since 1836) with around 15 times the amount of rain as in May 2020; it was also the wettest month of the year,.

It should also be noted that during 2020-21 and to a lesser extent the early part of 2021-22 there were periods of lockdown and travel restrictions which may have had some impact on the number of fires started deliberately. Timelines[13] published by the Senedd Research Centre note when these periods of lockdown came into being and when measures were eased.

Chart 14: Number of deliberate secondary grassland, woodland and crop fires by month



(r) Revised data.
(p) Provisional data.

[13] Coronavirus timeline - Fifth Senedd
Coronavirus timeline – Sixth Senedd

Casualties and rescues

Fatal casualties from fires

A fatal casualty is defined as a person whose death is attributed to a fire, even if the death occurred weeks or months later.

Provisional figures show there were 21 fatal casualties during 2021-22 (see table 8). This is the same as in the previous year which was the highest number since 2011-12. The overall trend since 2001-02 (when there were 38 fatalities) has been downward, however numbers are small and prone to fluctuation (see chart 15). In 2021-22 North Wales had the highest fatality rate of the 3 FRAs; the rate was slightly higher than in 2020-21, but there was no change in the number of fatalities. In Mid and West Wales the number and rate rose whilst South Wales saw a fall, compared with 2020-21.

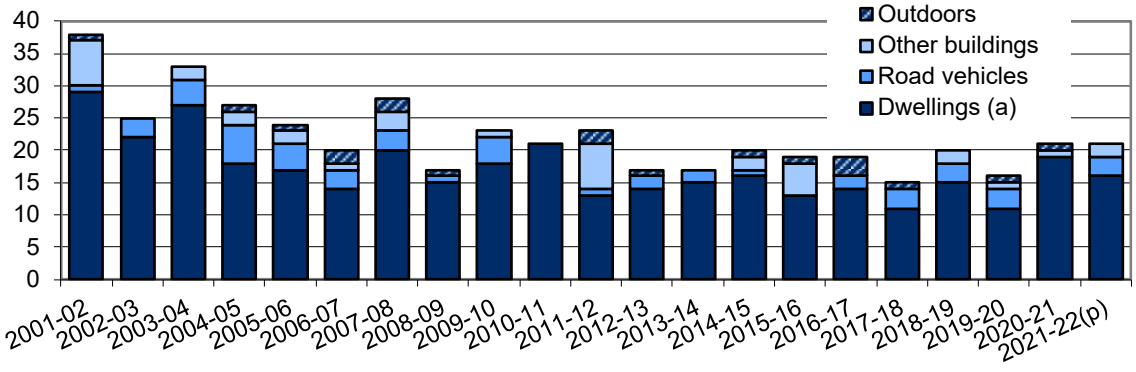
Table 8: Number and rate of fatal casualties from fires by Fire and Rescue Authority

	North Wales		Mid and West Wales		South Wales		**Wales**	
	Number(a)	pmp(b)	Number(a)	pmp(b)	Number(a)	pmp(b)	**Number(a)**	**pmp(b)**
2012-13	8	11.6	3	3.3	6	4.0	**17**	**5.5**
2013-14	3	4.3	8	8.9	6	4.0	**17**	**5.5**
2014-15	5	7.2	8	8.9	7	4.7	**20**	**6.5**
2015-16	6	8.7	4	4.4	9	6.0	**19**	**6.1**
2016-17	5	7.2	7	7.8	7	4.6	**19**	**6.1**
2017-18	2	2.9	11	12.2	2	1.3	**15**	**4.8**
2018-19	8	11.5	7	7.7	5	3.3	**20**	**6.4**
2019-20	4	5.7	3	3.3	9	5.8	**16**	**5.1**
2020-21	7	10.0	4	4.4	10	6.4	**21**	**6.6**
2021-22(p)	7	10.2	6	6.7	8	5.2	**21**	**6.8**

(a) Numbers of fatalities from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(b) Per million population. Population data are taken from ONS Mid-Year Estimates and are revised periodically and so rates are subject to change between publications. 2021-22 rates are based on population from the 2021 Census.
(p) Provisional data.

Since 2001-02, 77% of fatal casualties occurred in dwelling fires, equating to a total of 358 out of 464 fatalities. In 2021-22 76% of fatalities were the result of dwelling fires; there were 3 fewer dwelling fatalities than in the previous year.

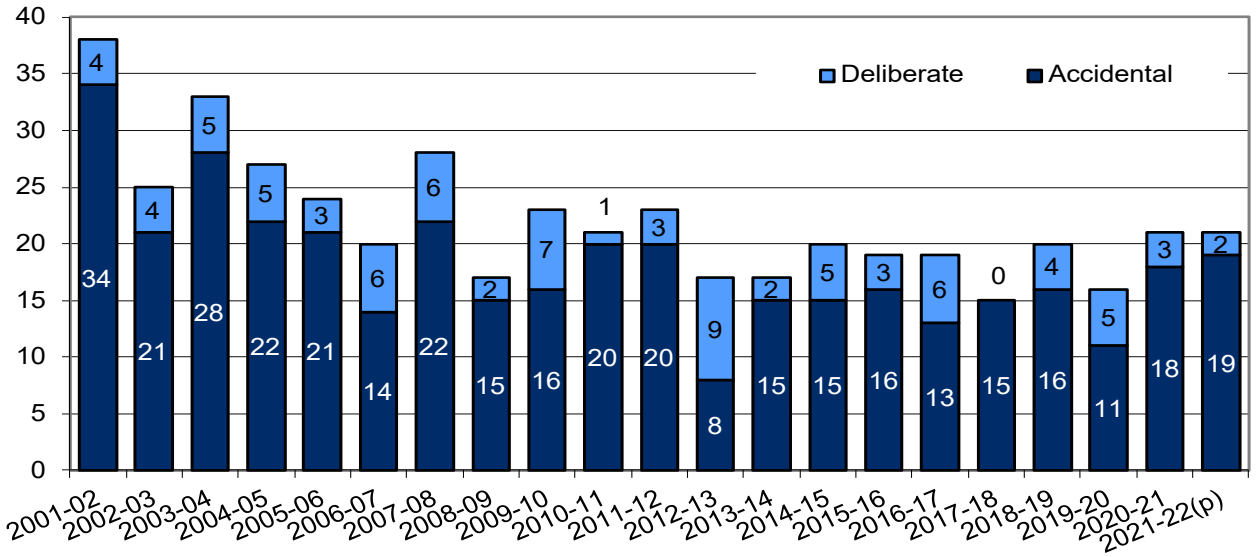
Chart 15: Number of fatal casualties from fires by location



(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

19 of the fatalities in 2021-22 were the result of accidental fires, 15 of which occurred in dwellings.

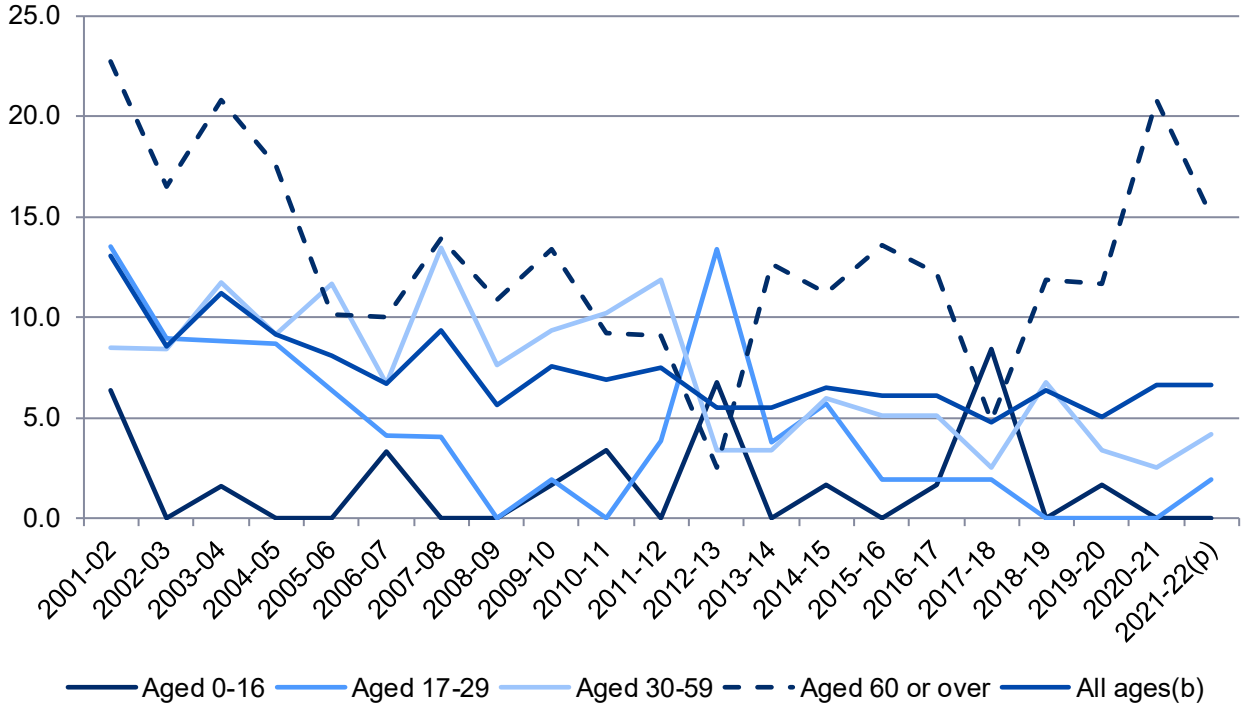
Chart 16: Number of fatal casualties from fires by motive



(p) Provisional data.

In 2021-22 13 of the 21 fatalities were aged 60 or over. For most of the available time series the age group '60 or over' had the highest fatality rate, and in 2021-22 the fatality rate for this group is noticeably higher than the other age groups.

Chart 17: Fatalities per million population(a), by age group

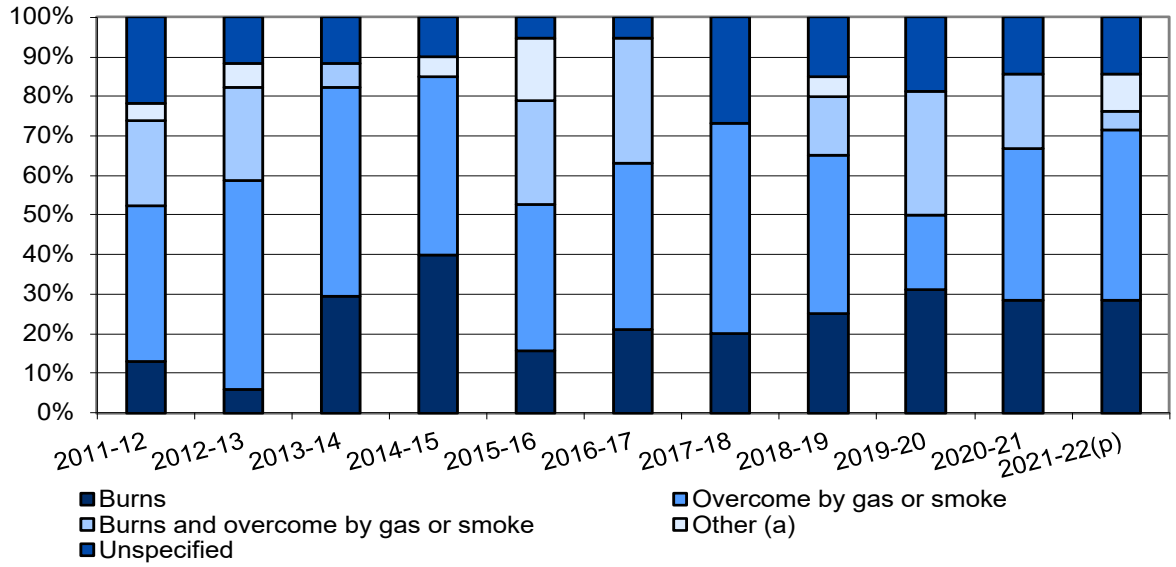


(a) Population data are taken from ONS Mid-Year Estimates revised periodically and so rates are subject to change between publications. Rates are calculated per age group. Population data for these age groups for 2021-22 are not yet available, the 2021-22 rate is calculated using Mid-Year Estimates for 2020.
(b) Includes fatalities of unknown age.
(p) Provisional data.

For the majority of fatalities in the available time series (since 2001-02) only three causes of death from fires in Wales have been recorded, those being overcome with smoke or gas (9 fatalities in 2021-22), burns (6 fatalities in 2021-22), and a combination of the two (1 fatality in 2021-22). In addition to these causes, in 2021-22 there were a further 2 fatalities recorded as 'other' and 3 fatalities who did not have their cause of death recorded by time of publication.

Since 2001-02 'being overcome by smoke or gas' has accounted for 44% of fatalities, 'burns' accounted for 23% of fatalities and a combination of the two caused 19% of fatalities.

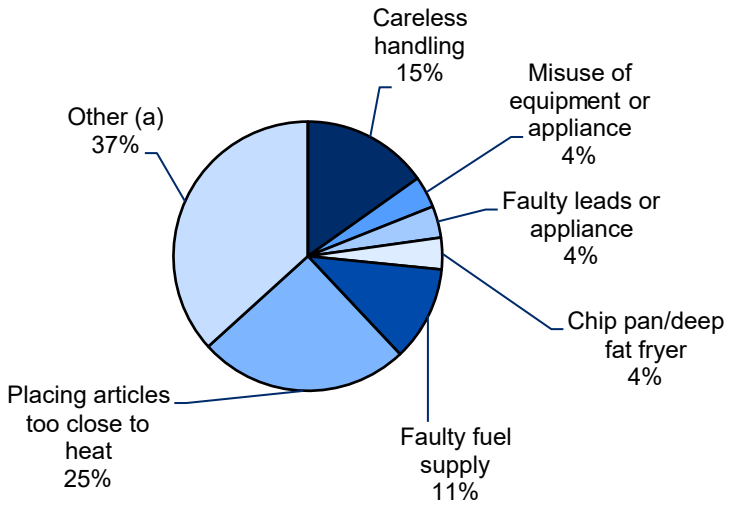
Chart 18: Percentage of fatal casualties by cause of death



(a) Other includes cardiac arrests and other physical injuries.
(p) Provisional data.

Of the 379 fatalities occurring in accidental fires from 2001-02 to 2021-22, 33% died in fires where the cause of the fire was recorded as 'careless handling'. Looking at the last 5 years only, this proportion has decreased to 15%, although the proportion with causes listed as 'other' has increased, in many cases the fire is still being investigated.

Chart 19: Percentage of fatal accidental fires by cause in the last 5 years (2017-18 to 2021-22)



(a) Other includes playing with fire and causes listed as 'other'.

Non-fatal casualties from fires

From April 2009 non-fatal casualties are recorded as being in one of four classes of severity as follows:

(i) Victim went to hospital, injuries appear to be serious

(ii) Victim went to hospital, injuries appear to be slight

(iii) First aid given at scene

(iv) Precautionary check recommended – this is when an individual is sent to hospital or advised to see a doctor as a precaution, having no obvious injury or distress.

Due to these changes and the introduction of a 'fire-related injury' marker there is a possible discontinuity in the number of non-fatal casualties, further information on this is available in the Quality Information section.

In 2021-22 there were 479 non-fatal casualties, a rise of 17% (and equating to 71 more casualties) compared with 2020-21. The overall trend over the last ten years has been downward, although in recent years the numbers and associated rates have fluctuated. All 3 FRAs in Wales saw a rise in the number (and rate) of non-fatal casualties. Mid and West Wales had the lowest casualty rate in 2021-22 and North Wales had the highest.

Table 9: Number and rate of non-fatal casualties from fires by Fire and Rescue Authority

	North Wales		Mid and West Wales		South Wales		**Wales**	
	Number(a)	pmp(b)	Number(a)	pmp(b)	Number(a)	pmp(b)	**Number(a)**	**pmp(b)**
2012-13	213	308.7	151	168.5	177	118.9	**541**	**176.0**
2013-14	276	399.3	167	186.3	183	122.4	**626**	**203.1**
2014-15	194	279.9	194	216.0	155	103.3	**543**	**175.6**
2015-16	213	307.2	177	196.9	202	134.1	**592**	**191.0**
2016-17	194	279.2	153	169.6	274	180.7	**621**	**199.5**
2017-18	156	224.0	144	159.2	226	148.2	**526**	**168.3**
2018-19	117	167.5	118	130.0	161	105.0	**396**	**126.2**
2019-20	139	198.7	104	114.3	266	172.4	**509**	**161.4**
2020-21	125	177.7	70	76.6	213	137.2	**408**	**128.7**
2021-22(p)	141	205.2	79	88.1	259	170.0	**479**	**154.1**

(a) Numbers of non-fatal casualties from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(b) Per million population. Population data are taken from ONS Mid-Year Estimates revised periodically and so rates are subject to change between publications. 2021-22 rates are based on population from the 2021 Census.
(p) Provisional data.

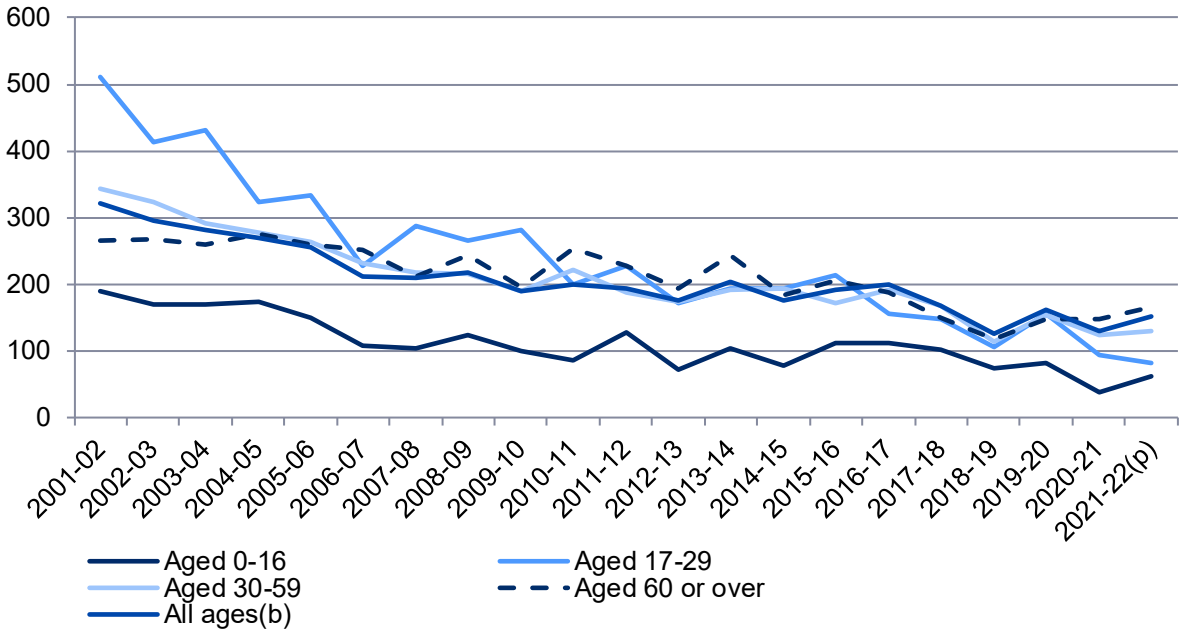
Although all casualty groups saw an increase the overall rise was driven by increased numbers of those receiving first aid or precautionary checks (up 21%).

In 2021-22, 70% of non-fatal casualties received first aid or were advised to have a precautionary check-up. 24% of non-fatal casualties were taken to hospital with slight injuries and the remaining 6% were taken to hospital with severe injuries.

Those aged 16 and under have consistently had the lowest non-fatal casualty rate per million population, with 62 in 2021-22, up from 37 in 2020-21. At the beginning of the time series the

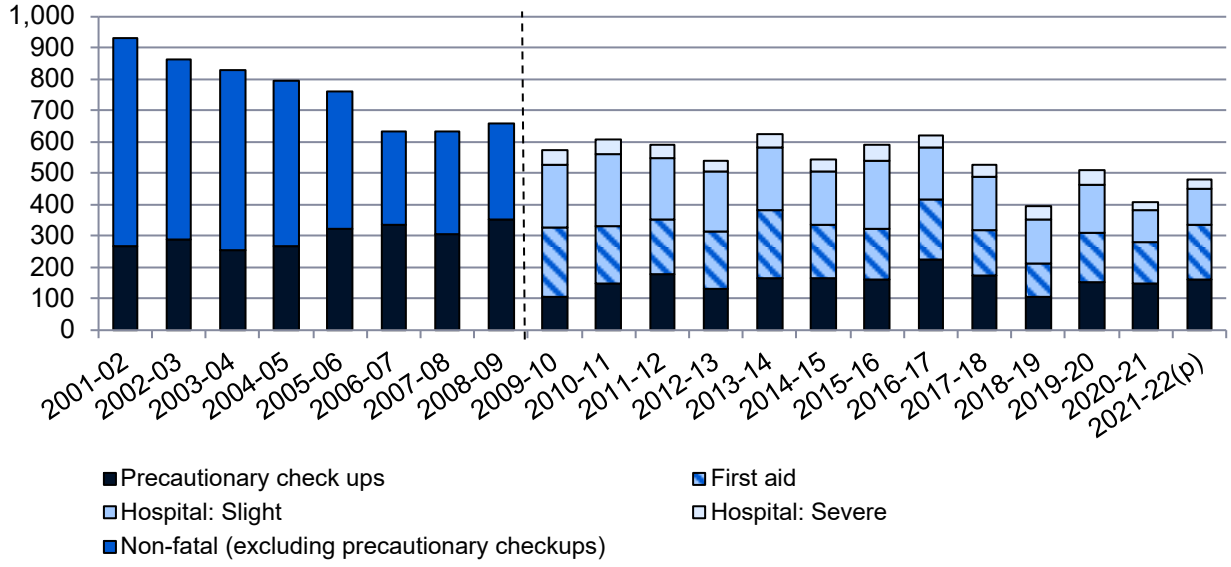
highest rate of casualties per million population occurred in the 17-29 age group, but over recent years the rate has dropped and since 2020-21 it was the second lowest rate for the age groups shown. It was also the only age group in 2021-22 to see a fall.

Chart 20: Non-fatal casualties per million population(a), by age group



(a) Population data are taken from ONS Mid Year Estimates revised periodically and so rates are subject to change between publications. Rates are calculated per age group. Population data for these age groups for 2021l are not yet available, the 2021-22 rate is calculated using Mid-Year Estimates for 2020.
(b) Includes casualties of unknown age.
(p) Provisional Data

Chart 21: Number of non-fatal casualties from fires by severity of injury(a)



(a) The introduction of IRS in 2009-10 led to a change in the way non-fatal casualties were recorded and a possible discontinuity, notably in the number of those receiving precautionary checks. See the 'Comparability' section in Key quality information for further clarification.
(p) Provisional data.

Of the 479 non-fatal casualties in 2021-22, 393 (82%) were the result of in dwelling fires, 46 (10%) in other buildings, 23 (5%) from road vehicle fires and 17 (4%) in outdoor fires.

Most non-fatal casualties (91%) were from accidental fires and 78% were the result of accidental dwelling fires.

Cooking (excluding chip pans) was responsible for 94 non-fatal casualties in accidental fires in 2021-22; as in other years this was the largest single cause of non-fatal casualties in accidental fires in 2021-22 (22%). Chip pan related casualties accounted for a further 14% of those in accidental fires.

Non-fatal casualties (excluding precautionary check-ups) from fires

In 2021-22, 143 non-fatal casualties were sent to hospital, an increase of 10% (13 casualties) compared with the previous year. Of these 143 non-fatal casualties, 87% were from accidental fires and almost three-quarters occurred in accidental fires in dwellings.

115 (80%) casualties who were sent to hospital had slight injuries.

The most common injury of non-fatal casualties who were sent to hospital was ‘being overcome with smoke or gas’ relating to 77 non-fatal casualties and 54% of those sent to hospital. This has been the most common injury for casualties sent to hospital since 2009-10, accounting for 43% of all non-fatal casualties sent to hospital since this time. There were 30 casualties in 2021-22 with burns, accounting for 21% of those sent to hospital.

Rescues from fires

In 2021-22, 179 people were rescued from fires, 69 (39%) of whom were not injured, 12 were fatalities (rescued but later died from fire-related injuries) and 98 were non-fatal casualties. In total this is a 23% increase in the number of rescues compared with the previous year, but the second lowest number in the available time series (from 2009-10).

In 2021-22, the majority (87%) of rescues (including those injured) from fires were from dwelling fires, a further 9% were rescued from other buildings and 3% from road vehicles. Less than 1% were rescued from Outdoor locations.

Table 10: Number of casualties and rescues by location

	Dwelling	Other building	Road vehicle	Outdoors	**All**
2019-20					
Fatalities	11	1	3	1	**16**
of which were rescued	6	0	0	0	**6**
Non-fatal casualties (a)	380	53	43	33	**509**
of which were rescued	*100*	*15*	*7*	*5*	***127***
Rescued (non-injured)	67	11	6	0	**84**
Total rescued	173	26	13	5	**217**
2020-21					
Fatalities	19	1	0	1	**21**
of which were rescued	9	0	0	0	**9**
Non-fatal casualties (a)	332	33	29	14	**408**
of which were rescued	*74*	*4*	*2*	*0*	***80***
Rescued (non-injured)	43	13	0	0	**56**
Total rescued	126	17	2	0	**145**
2021-22(p)					
Fatalities	16	2	3	0	**21**
of which were rescued	11	1	0	0	**12**
Non-fatal casualties (a)	393	46	23	17	**479**
of which were rescued	87	5	5	1	***98***
Rescued (non-injured)	57	11	1	0	**69**
Total rescued	155	17	6	1	**179**

(a) Includes casualties where it is unknown whether they were rescued.
(p) Provisional data.

In 2021-22, 53% of those rescued were male, compared with 47% recorded as female. 37% of those rescued were aged 60 or over and 27% were aged between 30 and 59.

62% of those rescued and had no injury were male. People aged 30-59 accounted for 22% of those who were rescued but not injured, a further 20% were aged 60 or over. 29% of those rescued but not injured, the age was not known.

Table 11: Number of casualties and rescues by gender and age

	Male	Female	0-16	17-29	30-59	60 or over	**All (a)**
2019-20							
Fatalities	10	6	1	0	4	10	**16**
of which were rescued	1	5	0	0	1	5	**6**
Non-fatal casualties (b)	285	222	49	80	183	126	**509**
of which were rescued	79	48	8	13	55	34	**127**
Rescued (not injured)	42	42	7	16	29	18	**84**
Total rescued	122	95	15	29	85	57	**217**
2020-21							
Fatalities	9	12	0	0	3	18	**21**
of which were rescued	4	5	0	0	1	8	**9**
Non-fatal casualties (b)	223	178	22	49	148	128	**408**
of which were rescued	46	34	5	3	27	36	**80**
Rescued (not injured)	40	14	3	4	22	10	**56**
Total rescued	90	53	8	7	50	54	**145**
2021-22(p)							
Fatalities	12	9	0	1	5	13	**21**
of which were rescued	6	6	0	1	3	8	**12**
Non-fatal casualties (b)	268	190	37	43	154	143	**479**
of which were rescued	45	53	5	5	30	45	**98**
Rescued (not injured)	43	25	9	11	15	14	**69**
Total rescued	94	84	14	17	48	67	**179**

(a) Includes those whose gender and/or age was unknown or not specified.
(b) Includes casualties where it is unknown whether they were rescued.
(p) Provisional data

Further data on this topic is available on StatsWales.

Fire false alarms

The data in this section refer to false alarms related to fires, data on SSI false alarms appear in the SSI section.

A fire false alarm is defined as an event in which the FRA was called to a reported fire which turned out not to exist. Fire false alarms are categorised as follows:

Malicious - where the call is deliberately for a non-existent fire-related event

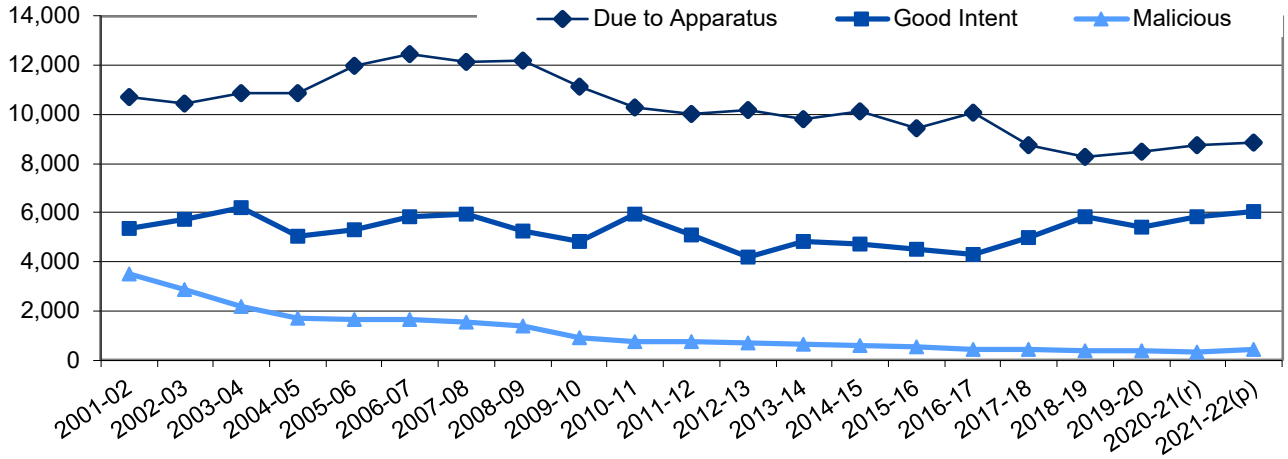
Good intent - in which the call was made in good faith in the belief that there was a fire to attend

Due to apparatus - in which the call was initiated by the operation of fire alarm and fire-fighting equipment

In 2021-22 there were 15,320 fire false alarms in Wales, up from 14,879 in 2020-21, an increase of 3% to the highest number since 2016-17. Overall, since 2001-02 the number of fire false alarms attended has fallen by 22% when there were almost 20,000 fire false alarms. FRAs suggest successful call challenging is a factor in this long-term fall (information taken from internal call logging systems).

All categories of fire false alarm saw increases in 2021-22 compared with 2020-21. Numbers of good intent fire false alarms rose by 4%, those due to apparatus rose by 1% whilst malicious fire false alarms rose by 33%.

Chart 22: Number of fire false alarms by reason



(r) Revised data.
(p) Provisional data.

Overall there has been a downward trend in the number of malicious fire false alarms, falling by 88% since 2001-02. Throughout the time series there have only been 4 year on year increases, occurring in 2006-07, 2011-12, 2019-20 and 2021-22, the earlier increases being relatively small (less than 2%). The increase in 2021-22 takes numbers of malicious fire false alarms to their highest level since 2016-17. All 3 FRAs saw a rise in the number of malicious fire false alarms in 2021-22 compared with 2020-21; in Mid and West Wales numbers rose by 70%, in South Wales up by 24% and in North Wales numbers there were 3 more equating to an 8% rise.

Table 12: Number of malicious fire false alarms by Fire and Rescue Authority(a)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	105	178	406	**689**
2013-14	77	161	408	**646**
2014-15	77	120	408	**605**
2015-16	51	127	380	**558**
2016-17	48	103	290	**441**
2017-18	39	138	242	**419**
2018-19	41	101	230	**372**
2019-20	41	110	224	**375**
2020-21	40	74	207	**321**
2021-22(p)	43	126	257	**426**
Percentage change 2020-21 to 2021-22	8	70	24	33

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(r) Revised data
(p) Provisional data.

Table 13: Number of fire false alarms by location and reason

	2017-18	2018-19	2019-20	2020-21(r)	2021-22(p)
Dwellings (a)	**5,623**	**5,799**	**6,127**	**6,255**	**6,737**
Fire alarm due to apparatus	3,445	3,322	3,641	3,933	3,836
Good intent false alarm	1,991	2,315	2,318	2,128	2,689
Malicious	187	162	168	194	212
Other buildings	**6,008**	**5,602**	**5,478**	**5,264**	**5,675**
Fire alarm due to apparatus	5,299	4,932	4,841	4,809	4,988
Good intent false alarm	542	526	494	374	527
Malicious	167	144	143	81	160
Road vehicles	**367**	**351**	**297**	**246**	**317**
Fire alarm due to apparatus	0	2	1	1	1
Good intent false alarm	358	344	290	240	308
Malicious	9	5	6	5	8
Outdoors	**2,163**	**2,733**	**2,379**	**3,114**	**2,591**
Fire alarm due to apparatus	1	2	1	5	6
Good intent false alarm	2,106	2,670	2,320	3,068	2,539
Malicious	56	61	58	41	46

(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

Fire false alarms in buildings other than dwellings rose by 8% and accounted for 37% of fire false alarms in 2021-22, the majority of which (88%) were due to apparatus. A breakdown of more detailed reasons is given in table 14. In dwellings, 57% of fire false alarms were due to apparatus and 40% were raised with good intent. Most (98%) 'other outdoors' fire false alarms were due to good intent, and these were mainly (82%) as a result of controlled burning.

Numbers of fire false alarms at outdoor locations fell by 17%; fire false alarms at dwellings and other buildings each rose by 8% whilst numbers in road vehicles rose by 29%.

In April 2015 North Wales FRA introduced a new strategy which meant they didn't automatically attend Automatic Fire Alarm Systems (AFA) [14] in non-domestic properties. This led to a 78% drop in false alarms due to apparatus in 'other buildings' (non-dwellings) being attended in North Wales

[14] North Wales Fire and Rescue Service – Automatic Fire Alarms

FRA in 2015-16 (when compared to the previous year). Following this, numbers have fluctuated but have remained under 350 call outs, compared with over 1,200 in 2015-16. The most recent data shows an increase of 8% compared with 2020-21. Mid and West Wales and South Wales also saw increases (4% and 3% respectively) compared with 2020-21.

In 2021-22, 42% of fire false alarms due to apparatus (in buildings) were the result of human causes, with cooking causing more than 1,900 of these fire false alarms (over a fifth of fire false alarms due to apparatus). Human factors triggered a greater proportion of fire false alarms in dwellings then in other buildings (58% and 29% respectively).

Of those fire false alarms in buildings which were due to apparatus, 31% were the result of problems with safety systems (faulty, damaged, poorly maintained and poorly sited). A further 14% were caused by of contaminants getting into the system. Contaminants (for example insects, dust and steam) were a bigger problem in other buildings than in dwellings, causing 18% of fire false alarms due to apparatus, but 9% of those in dwellings.

Table 14: Number of fire false alarms due to apparatus in buildings by detailed reason

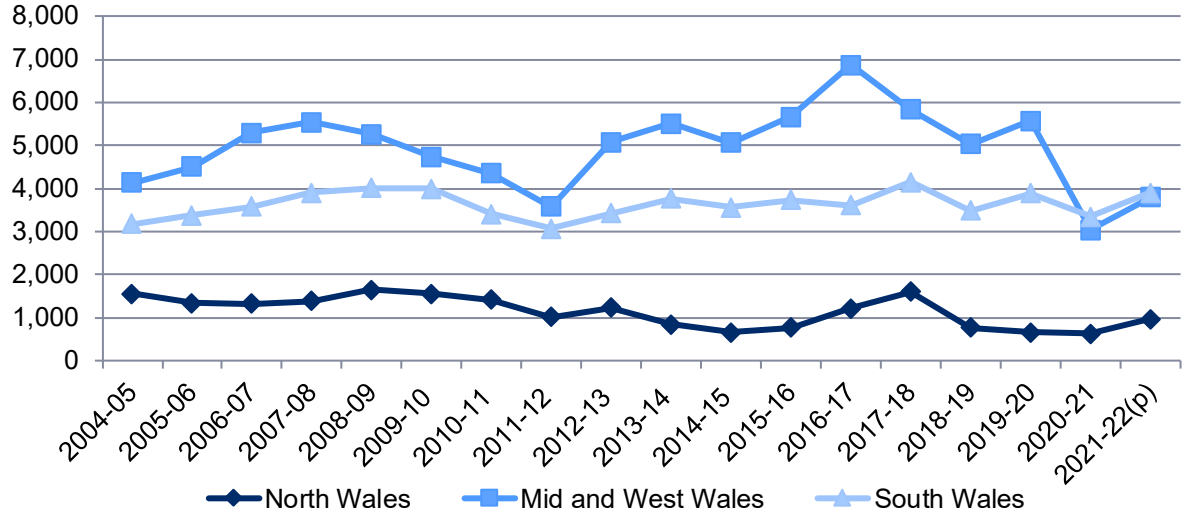
	2017-18	2018-19	2019-20	2020-21(r)	2021-22(p)
Dwellings(a)					
Contaminants	364	321	366	355	328
External factors	38	34	34	48	41
Human	1,563	1,533	1,781	2,032	2,214
Accidentally/ carelessly set off	*168*	*179*	*185*	*195*	*233*
Cooking/burnt toast	*1,102*	*1,064*	*1,256*	*1,418*	*1,532*
Smoking	*184*	*139*	*214*	*237*	*250*
Testing	*86*	*97*	*76*	*131*	*152*
Other	*23*	*54*	*50*	*51*	*47*
System: smoke alarm	961	940	903	859	675
System: other(b)	358	364	375	412	364
Animal	1	5	5	6	5
Unknown	160	125	177	221	209
All	**3,445**	**3,322**	**3,641**	**3,933**	**3,836**
Other buildings					
Contaminants	1,136	1,056	961	803	873
External factors	92	103	96	86	113
Human	1,493	1,631	1,446	1,213	1,452
Accidentally/ carelessly set off	*497*	*535*	*481*	*375*	*478*
Cooking/burnt toast	*575*	*561*	*497*	*378*	*417*
Smoking	*103*	*129*	*123*	*84*	*116*
Testing	*304*	*372*	*305*	*350*	*389*
Other	*14*	*34*	*40*	*26*	*52*
System: smoke alarm	1,300	1,026	1,131	1,253	1,108
System: other (b)	713	651	600	738	628
Animal	15	23	20	23	27
Unknown	550	442	587	693	787
All	**5,299**	**4,932**	**4,841**	**4,809**	**4,988**

(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) Includes heat, sprinkler, flame and other unspecified systems.
(p) Provisional data.

Special service incidents

In 2021-22, 25% of all incidents attended by FRAs in Wales were SSIs. These incidents include road traffic collisions (RTCs), flooding incidents, medical incidents etc. Unlike other incident types overall numbers of SSIs haven't seen a consistent downward trend and are prone to fluctuation. In 2021-22 many categories of SSIs saw an increase in numbers, this may be due to the impact of COVID-19 in 2020-21. Overall attendance at SSIs increased by 24% in 2021-22; all 3 FRAs saw increases in attendances at SSIs, rising by 55% in North Wales, 25% in Mid and West Wales and 17% in South Wales. The rise in SSIs in North Wales is mainly due to attendance at RTCs and assisting other agencies, each seeing over 100 incidents more than in 2020-21.

Chart 23: Number of SSIs attended by Fire and Rescue Authority(a)



(a) SSIs by FRA are not available prior to 2004-05. From 2004-05 until 2008-09 data were collected in the operational fire data collection. From 2009-10 onwards data has been available from IRS.
(p) Provisional data.

RTCs accounted for around a fifth of SSIs and attendance at these incidents rose by 38%.

Road traffic data [15]published by the Welsh Government for year ending Dec 2020 showed a 23% decrease compared with 2019. Road Traffic data for year ending Dec 2021 is not yet available but the ending of travel restrictions and lockdown measures is likely to have resulted in increased traffic volume compared with 2020. However [16]there is evidence to suggest many employees are continuing to work from home and so traffic volumes may not be as high as in previous years.

Numbers of attendances at medical incidents rose by 60%.

In 2021-22 flooding incidents decreased by 44% to the lowest number of attendances since 2014-15.

Most categories of SSIs as shown in Table 15 saw increases following falls in 2020-21 likely to be due to the COVID-19 pandemic. The exceptions to this being flooding (down 44%), 'Rescue or evacuation from water' (down 18%) and 'Hazardous materials incidents' (down 9%), 'Other

[15] Road traffic StatsWales tables
[16] Is hybrid working here to stay?

rescue/release of people' saw an increase of 67%, 'Making safe incidents' more than doubled, 'Lift release' rose by 34%, 'Effecting entry' up 45% and 'Removal of objects from people' saw an increase of 33%.

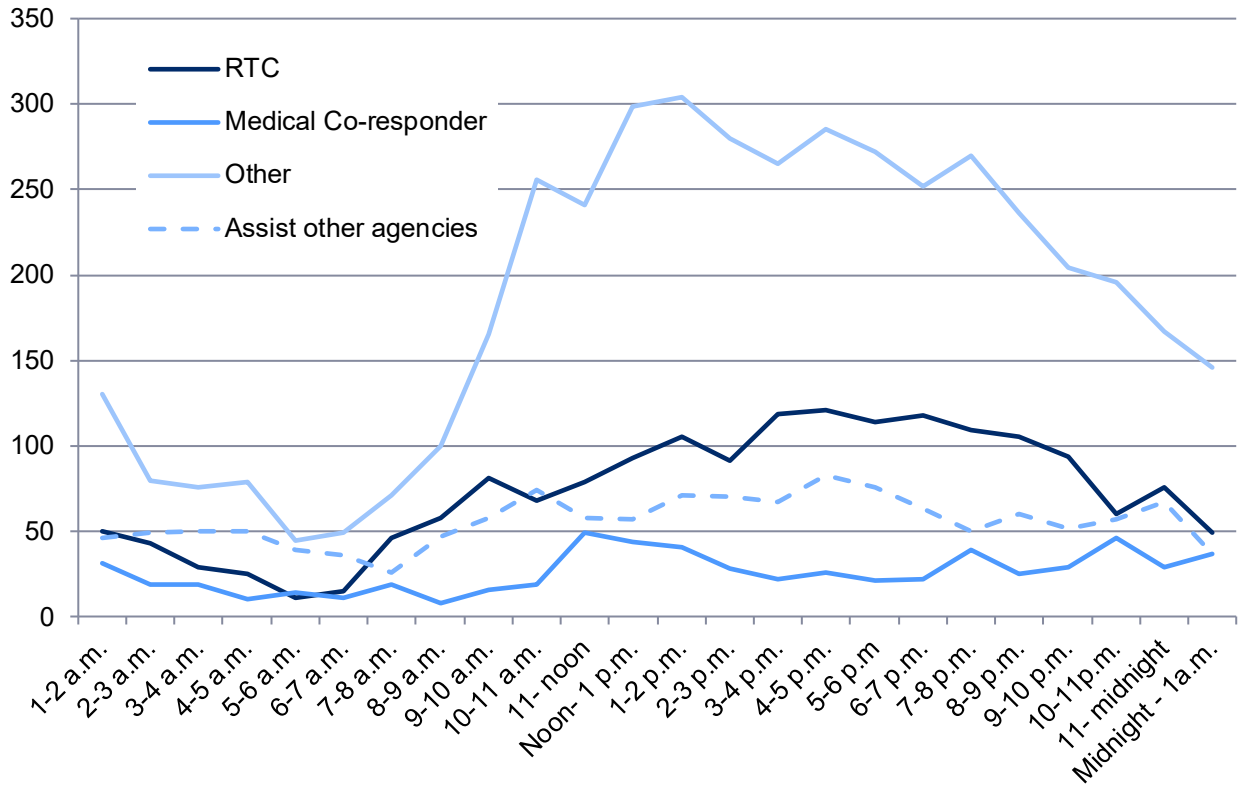
Table 15: Number of SSIs by type

	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Road traffic collision	2,331	2,202	2,122	1,278	1,759
Flooding	586	571	993	876	490
Rescue or evacuation from water	117	97	214	147	121
Other rescue/release of people	376	327	322	256	428
Animal assistance incidents	317	305	329	261	306
Making Safe	265	283	346	235	531
Lift release	401	360	359	217	290
Effecting entry	671	563	572	469	678
Removal of objects from people	306	278	276	337	449
Medical incident - Co-responder/First responder	3,023	1,809	2,117	390	624
Assist other agencies	1,672	1,098	1,034	954	1,343
Other(a)	944	870	968	1,023	1,176
All Special Service Incidents	**11,009**	**8,763**	**9,652**	**6,443**	**8,195**
All Special Service False Alarms	575	515	473	577	481

(a) Other includes 'other transport incident', 'hazardous materials incidents', 'spills and leaks', 'suicide/attempted suicide', 'evacuation', 'water provision', 'advice only', 'standby' and 'services not required'.
(p) Provisional data

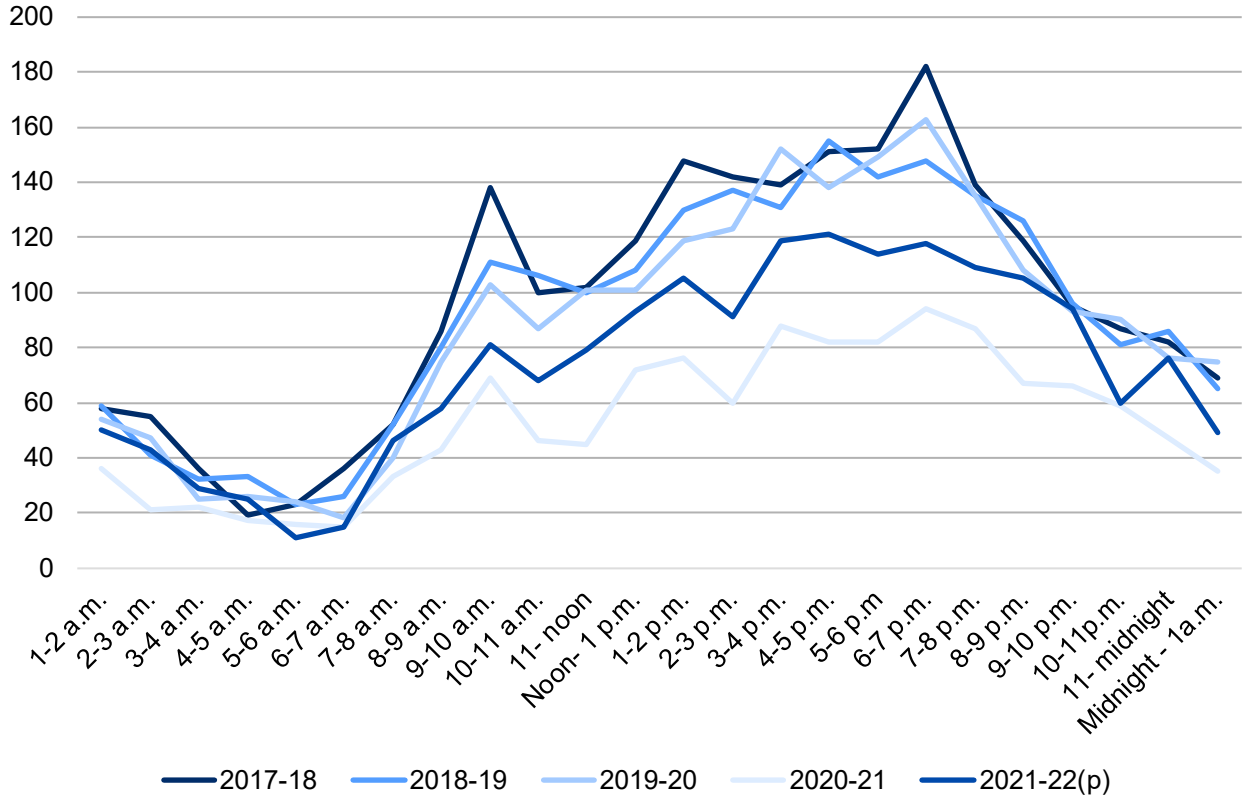
The chart below shows the majority of SSIs are attended in the day, between 9a.m. and 9p.m., with more than 7 in 10 occurring in these 12 hours, a similar picture to previous years.

Chart 24: Number of RTCs, Medical responder incidents and others attended by time of day, 2021-22



However, for the past two years the line showing numbers of RTCs is flatter than in previous years. This may be expected since, with many working from home and periods of lockdown, there were not the same peaks in traffic at rush hours.

Chart 25: Number of RTCs attended by time of day



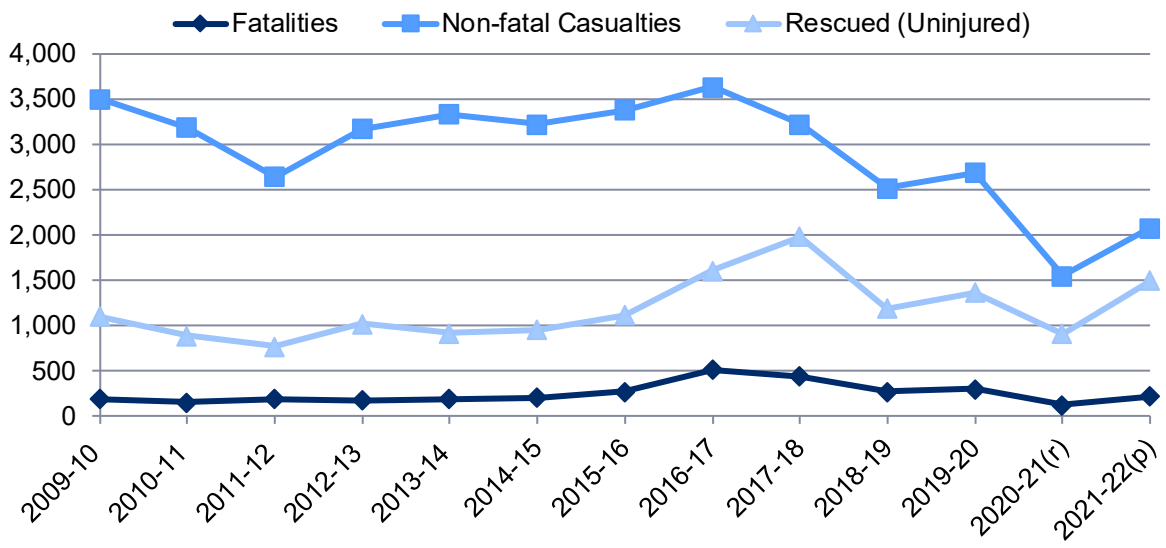
(p) Provisional data

There are consistently more casualties and rescues from SSIs than from fires, though numbers of casualties in SSIs include where the fires service are assisting the ambulance services. In 2021-22 there were 220 fatalities from SSIs, a 71% increase. Almost a quarter (53) the number of SSI fatalities occurred in RTCs.

35% of SSI fatalities in 2021-22 occurred in medical incidents, compared with 6% in 2020-21.

There were 2,079 non-fatal casualties from SSIs in 2021-22, a rise of 34% compared with 2020-21, the second lowest number in the time series. RTCs accounted for 51% of non-fatal casualties in 2021-22 whilst medical incidents accounted for 12%.

Chart 26: Number of SSI related fatalities, non-fatal casualties and rescues



(p) Provisional data

Table 16: Number of SSI related fatalities, non-fatal casualties and rescues

	Fatalities		Non-fatal Casualties		Rescued
	All	*of which were rescued*	All	*of which were rescued*	(Uninjured)
2012-13	179	41	3,174	1,013	1,025
2013-14	194	44	3,334	944	918
2014-15	208	47	3,224	923	960
2015-16	272	47	3,382	991	1,120
2016-17	515	45	3,639	1,033	1,610
2017-18	444	45	3,229	1,010	1,988
2018-19	277	28	2,518	909	1,189
2019-20	301	38	2,689	894	1,368
2020-21(r)	129	29	1,550	742	915
2021-22(p)	220	42	2,079	905	1,502

(p) Provisional data.

In 2021-22 44% of non-fatal casualties in SSIs were rescued. Of those who were rescued (but uninjured), 18% related to 'Effecting entry' incidents and 17% were rescues not related to water.

More data on SSIs can be found on StatsWales.

Smoke alarms

This section looks at fires in dwellings attended by the FRA and the effectiveness of smoke alarms. Any fires involving alarms where no emergency call was made to the FRA will not be recorded, and therefore the figures reported should understate the effectiveness of smoke alarms.

Some buildings have multiple smoke alarms and so in this section some tables and charts refer to numbers of fires whilst others refer to numbers of smoke alarms. Chart 26, table 17, chart 27 and chart 28 refer to numbers of fires. In these charts and tables, the following hierarchy has been applied to the smoke alarm operation:

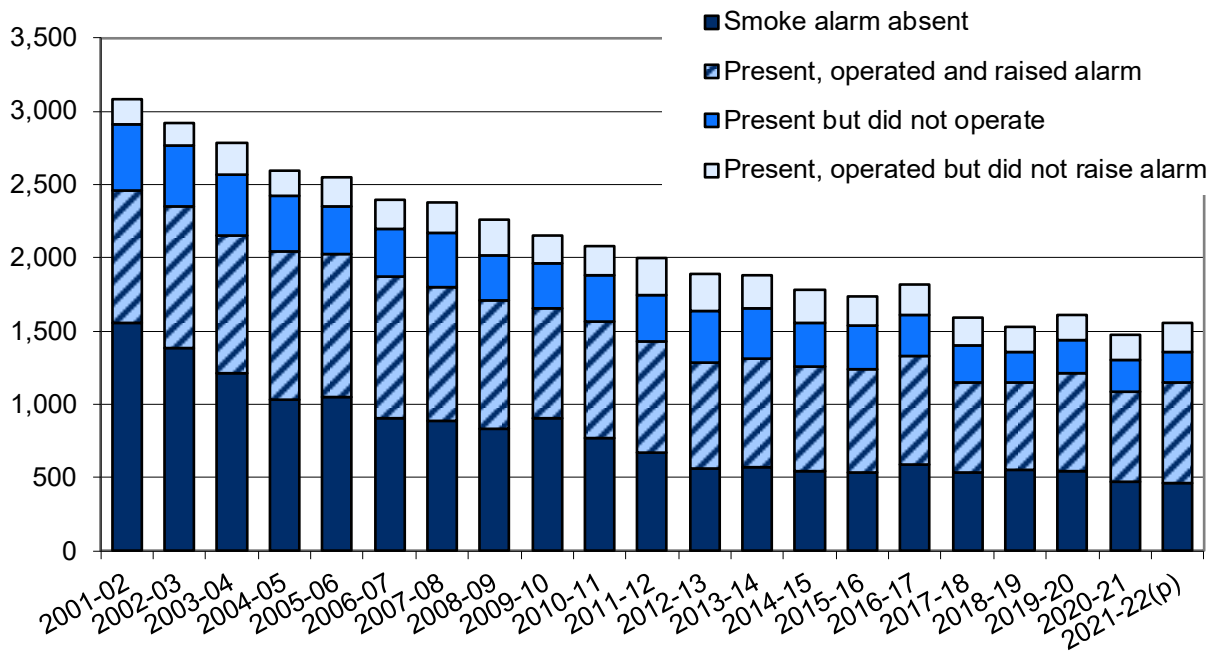
1. Present, operated and raised the alarm

2. Present, operated but didn't raise alarm

3. Present but didn't operate

Therefore an alarm which operated and raised the alarm 'outranks' one which operated but didn't raise the alarm and so on. In many cases the reason a smoke alarm that operates does not raise the alarm is that the alarm has already been raised prior to the operation of this smoke alarm.

Chart 27: Number of fires in dwellings by presence and operation of smoke detectors(a)



(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data

A smoke alarm was present and operated correctly in 56% of fires in dwellings occurring in 2021-22. In a further 13% of cases a smoke alarm was present but failed to operate, whilst in 29% of dwelling fires a smoke alarm was absent. In 2% of dwelling fires it was unknown whether there was a smoke alarm. Reasons for the smoke detector not operating or raising the alarm are explored in tables 18 and 19.

Since 2001-02 the number of dwelling fires where there was no smoke alarm has fallen by 70%. In only 11% of dwelling fires in North Wales a smoke alarm was absent; respective percentages are higher for Mid and West Wales and South Wales (42% and 31% respectively).

Table 17 shows that the number of dwellings fires where a smoke alarm was absent decreased by 2% to 462 in 2021-22 (the lowest number in the time series); this was in spite of a 6% increase in the number of dwelling fires.

In 2020-21, only Mid and West Wales saw an increase (11%) in the number of dwelling fires where smoke alarms were absent (compared with the previous year). Both North Wales and South Wales saw decreases, of 14% and 10% respectively.

Table 17: Number of fires in dwellings where smoke alarm was absent, by Fire and Rescue Authority (a)(b)

	North Wales	Mid and West Wales	South Wales	**Wales**
2012-13	67	181	313	**561**
2013-14	75	225	273	**573**
2014-15	49	205	288	**542**
2015-16	51	208	275	**534**
2016-17	62	227	299	**588**
2017-18	61	224	254	**539**
2018-19	47	236	271	**554**
2019-20	48	192	304	**544**
2020-21	57	186	230	**473**
2021-22(p)	49	206	207	**462**
Percentage change 2020-21 to 2021-22	-14	11	-10	-2

(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(b) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data

For context, approximately 5% of all households in Wales had no smoke alarms (National Survey for Wales 2017-18[17]).

Since 2009-10, 51 of the 176 accidental dwelling fire fatalities occurred in fires where a smoke alarm was known to be absent. 49 fatalities have occurred in accidental dwelling fires where a smoke alarm was present and raised the alarm.

Table 18 shows the number of smoke alarms which were present and operated at building fires but did not raise the alarm and the reasons for this. It includes multiple alarms in buildings which behaved in this way and so does not equate to numbers of dwellings and other building fires.

[17] National Survey for Wales – Results Viewer

Table 18: Number of smoke alarms, which were present at building fires but did not raise alarm, by reason

	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Dwellings (a)					
Alarm was raised before system operated	109	109	114	113	126
No person in earshot	34	26	16	18	37
Occupants did not respond	26	24	32	23	25
No other person responded	6	2	1	6	3
Other	12	7	7	9	6
Unknown	4	1	1	0	5
All dwellings	**191**	**169**	**171**	**169**	**202**
Other buildings					
Alarm was raised before system operated	46	27	42	28	53
No person in earshot	10	10	5	6	8
Occupants did not respond	2	1	0	0	2
No other person responded	1	0	0	1	1
Other	0	1	0	3	3
Unknown	1	1	1	3	2
All other buildings	**60**	**40**	**48**	**41**	**69**

(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data

In 2021-22 there were 179 smoke alarms which activated but did not raise the alarm due to the alarm having already been raised. This equates to 66% of the smoke alarms which did not raise the alarm. This has consistently been the most common reason for a smoke alarm failing to raise the alarm despite being activated (for the available time series which dates from 2009-10).

In 2021-22, of the smoke alarms which did not raise the alarm 17% were due to no one being in earshot, and a further 10% were due to occupants not responding.

Table 19 includes multiple smoke alarms at building fires which did not activate and so does not equate to the number of dwelling and other building fires.

In 2021-22 the main reason for smoke alarm failures, in both dwellings and other buildings, was that the fire was not close enough to the detector (49% of the smoke alarms which failed to activate in building fires). Defective or missing batteries accounted for 10% of alarm failures in dwelling fires and 3% in other buildings in 2021-22.

Table 19: Number of smoke alarms present in fires in buildings, which did not activate by reason

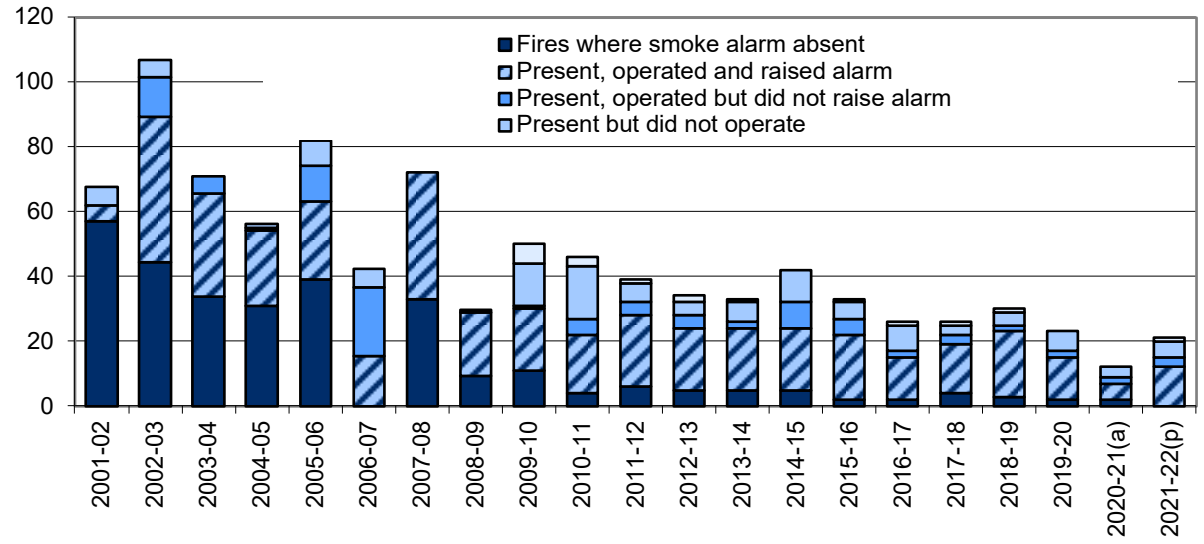
	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Dwellings (a)					
Fire not close enough to detector	138	126	121	111	100
Fire in area not covered by system	21	18	31	35	22
Alarm battery missing/defective	21	19	19	16	20
Fault in system	7	8	7	11	7
Detector removed	5	4	5	5	10
Alerted by other means	22	15	10	6	8
Other (b)	24	20	22	24	31
Unknown	13	7	10	6	10
All	**251**	**217**	**225**	**214**	**208**
Other buildings					
Fire not close enough to detector	46	33	43	29	34
Fire in area not covered by system	19	17	9	8	9
Alarm battery missing/defective	1	0	0	1	2
Fault in system	4	4	4	3	1
Detector removed	1	3	4	0	0
Alerted by other means	14	7	5	7	5
Other (b)	11	15	13	5	14
Unknown	5	3	7	3	2
All	**101**	**82**	**85**	**56**	**67**

(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) Includes where system has not set up correctly, system has been damaged by fire and system was turned off.
(p) Provisional data.

Smoke alarms in fires at schools

Of the 21 fires occurring in schools in 2021-22, a smoke alarm was present and operated correctly in 71% of incidents, whilst in a further 24% of cases a smoke alarm was present but failed to operate. There was 1 school fire where the presence of a smoke alarm was unknown.

Chart 28: Number of fires in schools by presence and operation of smoke detectors

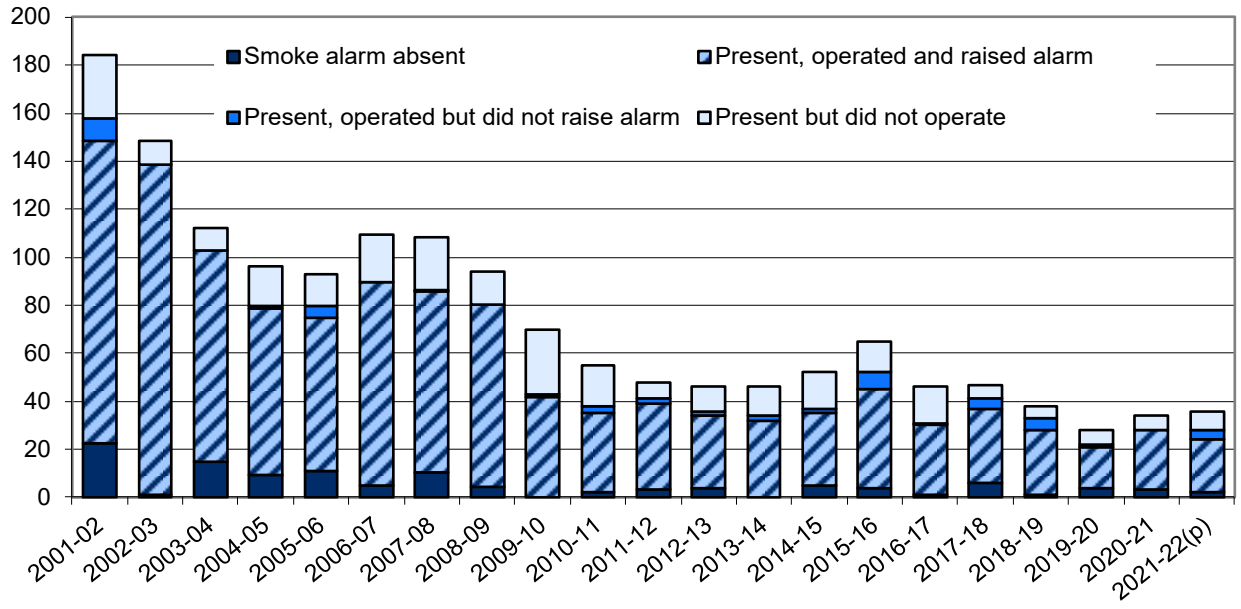


(a) Throughout 2020-21, due to Covid there were periods when schools were closed to most pupils.
(p) Provisional data.

Smoke alarms in fires at hospitals and medical care facilities

In 2021-22 there were 36 fires in hospitals and medical facilities[18], 1 more than in the previous year but a fall of 80% compared with the number in 2001-02. A smoke alarm was present and operated correctly in 72% of fires in hospitals in 2021-22. In 22% of hospital fires a smoke alarm was present but failed to operate. At 2 fires it was recorded a smoke alarm was absent.

Chart 29: Number of fires in hospitals by presence and operation of smoke detectors(a)



(a) Includes fires at hospitals and other medical care (e.g. veterinary surgeries, dentists, day centres, GP surgeries etc.)
(p) Provisional data.

27 of the 36 hospital fires occurring in 2021-22 were accidental.

Since 2009-10 there have been no fatalities and 18 non-fatal casualties in hospital fires.

Further data is available on this topic on StatsWales.

[18] Includes GP surgeries, day centres, dentists and vets.

Cause of fires

The **cause of fire** is the defect, act or omission leading to ignition of the fire.

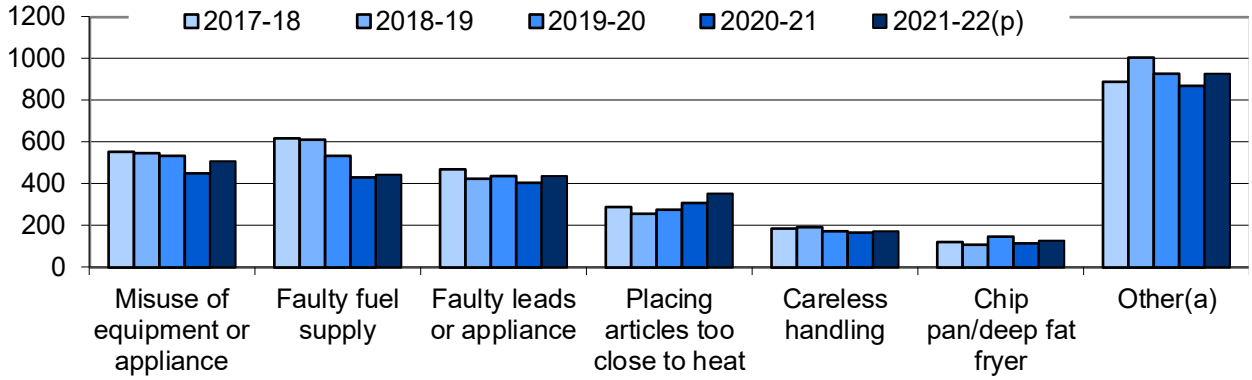
The **source of ignition** is the source of the flame, spark or heat that started the fire.

This information is collected for primary fires, but not secondary or chimney fires.

Cause of accidental primary fires

Misuse of equipment or appliance was the largest single cause of accidental fires in 2021-22 (17%). Faulty fuel supply and faulty leads or appliances accounted for 15% of accidental fires. Smaller categories have been grouped together as 'other accidental', accounting for 32% of accidental fires.

Chart 30: Number of accidental primary fires by cause



(a) 'Other' includes 'Accumulation of flammable material', 'Bonfire going out of control', 'Chimney fire', 'Natural occurrence', 'Other', 'Other intentional burning, going out of control', 'Overheating, unknown cause', 'Person too close to heat source (or fire)', 'Playing with fire (or heat source)', 'Vehicle crash or collision'.
(p) Provisional data

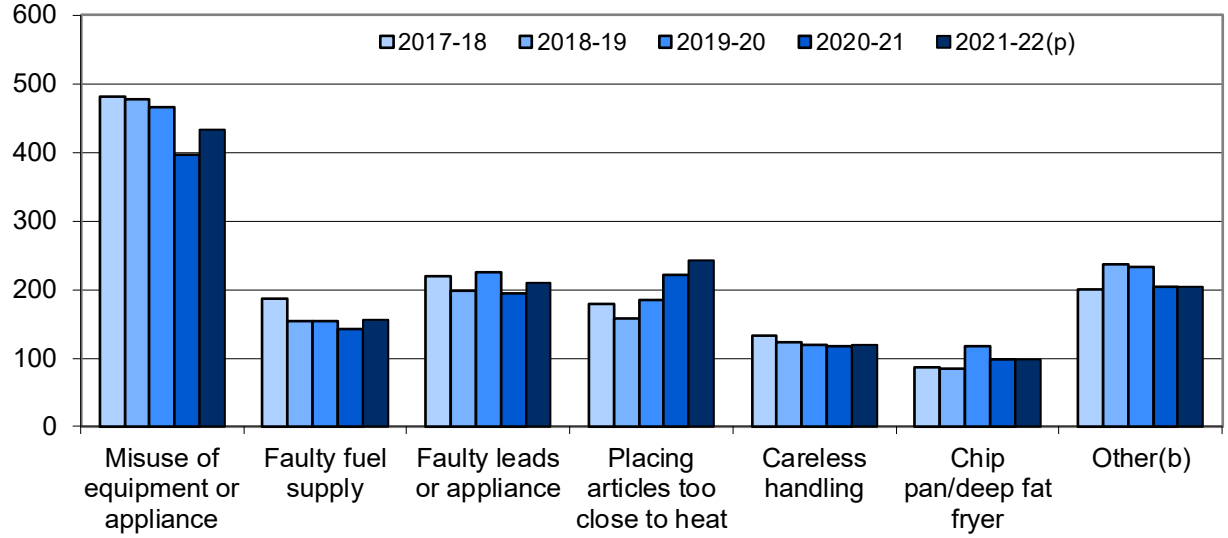
Table 20: Number of accidental primary fires by cause

	Misuse of equipment or appliance	Faulty fuel supply	Faulty leads or appliance	Placing articles too close to heat	Careless handling	Chip pan /deep fat fryer	Other(a)	Total
2012-13	729	603	613	271	178	164	782	**3,340**
2013-14	755	660	499	281	217	130	903	**3,445**
2014-15	699	622	546	281	202	145	852	**3,347**
2015-16	640	617	558	271	204	142	876	**3,308**
2016-17	678	630	514	301	181	157	902	**3,363**
2017-18	554	618	469	286	186	117	887	**3,117**
2018-19	544	609	420	256	188	109	1,007	**3,133**
2019-20	536	531	437	273	173	144	924	**3,018**
2020-21	448	429	402	306	165	114	872	**2,736**
2021-22(p)	508	442	434	350	169	123	924	**2,950**

(a) See footnote (a) of chart 29.
(r) (p) Provisional data

The misuse of equipment or appliances was the main cause of accidental fires in dwellings, with 434 cases recorded in 2021-22. This equates to 30% of accidental dwelling fires in 2021-22 and a rise of 9% compared with 2020-21. All the main causes saw increases in 2021-22; accidental dwelling fires caused by placing articles to close to a heat source increased by 9%, whilst those caused by faulty fuel supply and faulty leads and appliances each increased by 8%.

Chart 31: Number of accidental dwelling(a) fires by cause



(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) 'Other' includes 'Accumulation of flammable material', 'Bonfire going out of control', 'Chimney fire', 'Natural occurrence', 'Other', 'Other intentional burning, going out of control', 'Overheating, unknown cause', 'Person too close to heat source (or fire)', 'Playing with fire (or heat source)', 'Vehicle crash or collision'.
(p) Provisional data.

Table 21: Number of accidental dwelling(a) fires by cause

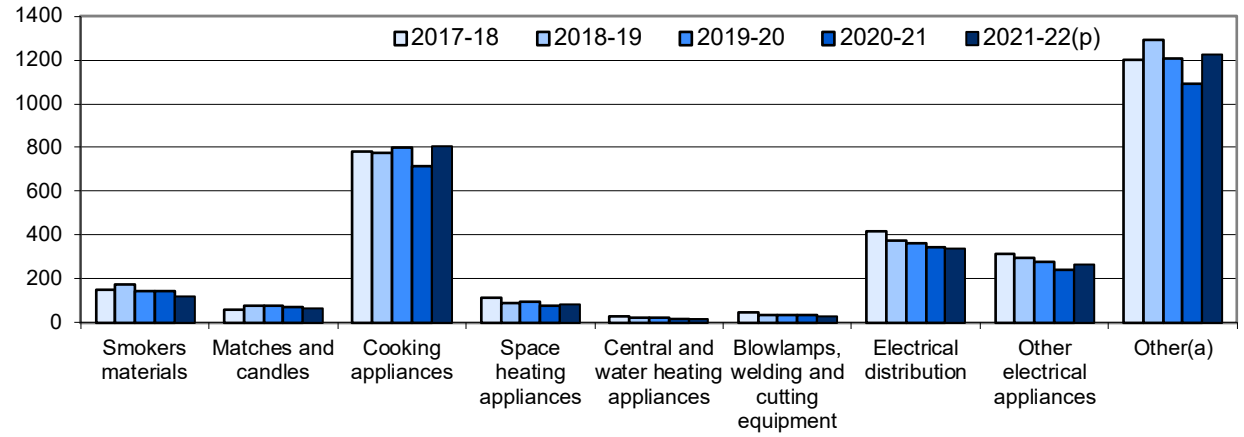
	Misuse of equipment or appliance	Faulty fuel supply	Faulty leads or appliance	Placing articles too close to heat	Careless handling	Chip pan /deep fat fryer	Other(b)	Total
2012-13	623	170	285	181	133	140	193	**1,725**
2013-14	657	184	226	188	155	110	212	**1,732**
2014-15	593	163	237	175	145	121	201	**1,635**
2015-16	540	165	253	179	145	118	209	**1,609**
2016-17	572	193	248	205	131	133	237	**1,719**
2017-18	481	186	219	179	133	86	201	**1,485**
2018-19	477	153	199	157	123	85	236	**1,430**
2019-20	467	154	225	184	119	117	232	**1,498**
2020-21	397	143	194	222	117	98	204	**1,375**
2021-22(p)	434	155	210	243	120	99	205	**1,466**

(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) See footnote (b) of chart 30.
(p) Provisional data.

Source of ignition in accidental primary fires

Cooking appliances have consistently been recorded as the main source of accidental fires. In 2021-22 there were 808 cases (27% of accidental fires), 13% more than in the previous year. Most categories saw increases, the exceptions being smokers' materials (down 17%), blowlamps/welding equipment (down 9%), electrical distribution (down 2%) and matches and candles (down 1%).

Chart 32: Number of accidental primary fires by source of ignition



(a) 'Other' includes 'Bombs and explosives', 'Chimney', 'Fireworks', 'Fuel/Chemical', 'Heating equipment', 'Industrial equipment', 'Naked flame', 'Natural occurrence', 'Oil and Incense burners', 'Other', 'Gardening equipment', 'Spread from secondary fire', 'Wet hay', 'Vehicle related' and other electrical appliances where the power source is not recorded as electrical.
(p) Provisional data.

In 2021-22 there were 30 non-fatal casualties in accidental fires in dwellings which were attributable to smokers' materials, 5 fewer than the number in the previous year. There were 5 fatalities due to smoking materials, 1 more than in the previous year. Since 2009-10, 35% of fatalities in accidental fires in dwellings were caused by smokers' materials. The National Survey for Wales[19] found that in 2021-22 13% of adults smoked daily or occasionally.

Table 22: Number of accidental primary fires by source of ignition

	Smokers materials	Matches and candles	Cooking appliances	Space heating appliances	Central and water heating appliances	Blowlamps, welding and cutting equipment	Electrical distribution	Other electrical appliances	Other (a)	Total
2012-13	134	71	1,009	120	32	49	493	369	1,063	**3,340**
2013-14	164	87	1,012	114	28	44	483	354	1,159	**3,445**
2014-15	163	80	969	117	38	50	437	361	1,132	**3,347**
2015-16	158	91	917	104	35	40	448	339	1,176	**3,308**
2016-17	155	86	972	105	40	39	439	358	1,169	**3,363**
2017-18	152	57	783	113	32	48	416	315	1,201	**3,117**
2018-19	173	75	776	88	23	34	376	296	1,292	**3,133**
2019-20	144	75	800	96	22	33	365	276	1,207	**3,018**
2020-21	144	69	717	79	14	34	345	244	1,090	**2,736**
2021-22(p)	119	68	808	82	15	31	339	266	1,222	**2,950**

(a) See footnote (a) of chart 31.
(p) Provisional data.

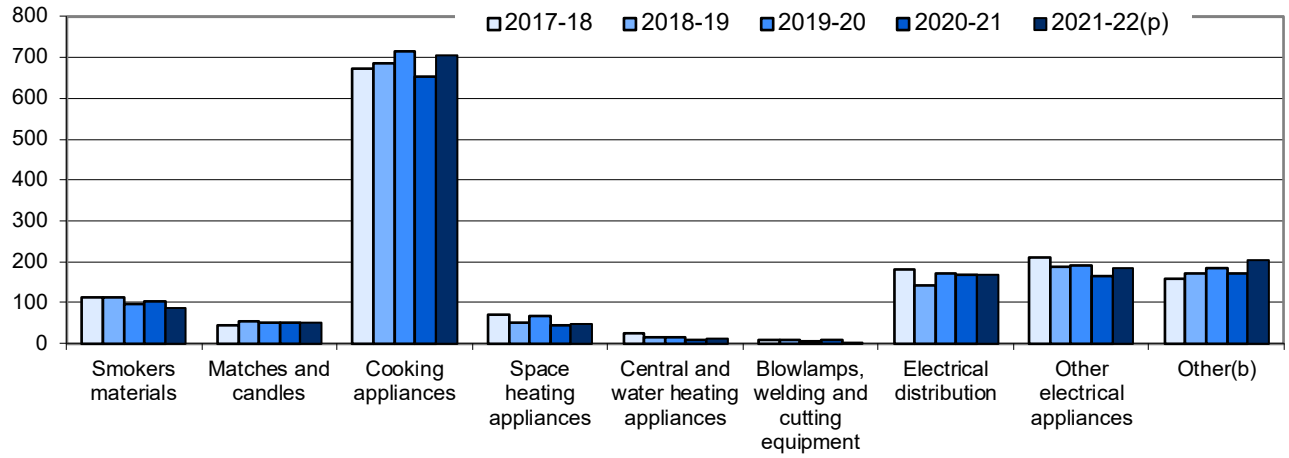
In November 2011, a new EU directive required cigarettes to meet a reduced ignition propensity (RIP) requirement, they are now manufactured to be self-extinguishable, reducing the chance that

[19] National Survey for Wales: results viewer

they should set fire to combustible materials. However we are not able to determine how many of the fires ignited by “smokers’ materials” are related to cigarettes.

In 48% of accidental dwelling fires in 2021-22 cooking appliances were the main source of ignition. In 2021-22 the number of these fires rose by 8% compared with the previous year, since 20021-02 the number has fallen by almost half. Fires ignited by cooking appliances have also been responsible for 13% fatalities and 53% of non-fatal casualties in accidental dwelling fires since 2009-10. Over the same period ‘Other electrical appliances’ accounted for 8% of fatalities and 11% of non-fatal casualties in accidental dwelling fires.

Chart 33: Number of accidental dwelling(a) fires by source of ignition



(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) ‘Other’ includes ‘Bombs and explosives’, ‘Chimney’, ‘Electric lighting’, ‘Fireworks’, ‘Fuel/Chemical’, ‘Industrial equipment’, ‘Oil and Incense burners, ‘Naked flame’, ‘Natural occurrence’, ‘Office equipment’, ‘Other’, ‘Other appliance or equipment’, ‘Spread from secondary fire’, ’Vehicle related’, ‘Wet hay’ and other electrical appliances where the power source is not recorded as electrical.
(p) Provisional data.

Table 23: Number of accidental dwelling(a) fires by source of ignition

	Smokers materials	Matches and candles	Cooking appliances	Space heating appliances	Central and water heating appliances	Blowlamps, welding and cutting equipment	Electrical distribution	Other electrical appliances	Other (b)	Total
2012-13	100	53	872	88	27	11	194	230	150	**1,725**
2013-14	117	63	892	80	22	14	195	207	142	**1,732**
2014-15	116	55	840	73	24	5	182	197	143	**1,635**
2015-16	109	69	789	68	28	5	191	196	154	**1,609**
2016-17	114	69	830	77	29	11	196	222	171	**1,719**
2017-18	113	44	673	72	24	9	180	212	158	**1,485**
2018-19	113	53	685	52	14	8	143	189	173	**1,430**
2019-20	97	52	714	68	14	4	171	192	186	**1,498**
2020-21	104	50	653	45	10	8	168	164	173	**1,375**
2021-22(p)	88	52	707	47	11	3	169	184	205	**1,466**

(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) See footnote (b) of chart 32.
(p) Provisional data.

In 2021-22 around 15% of accidental fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. Chip pans were responsible for 15% of accidental fires where cooking appliances ignited.

Table 24: Number of accidental primary fires by cause and source of ignition 2021-22(p)

	Misuse of equipment or appliance	Faulty fuel supply	Faulty appliances or leads	Placing articles too close to heat	Careless handling	Chip pan/ deep fat fryer	Other	**Total**
Smokers materials	4	0	0	14	86	0	15	**119**
Matches and candles	6	0	0	27	19	0	16	**68**
Cooking appliances	442	13	30	140	27	122	34	**808**
Space heating appliances	10	1	16	33	2	0	20	**82**
Central and water heating appliances	0	1	11	1	0	0	2	**15**
Blowlamps, welding and cutting	10	0	0	14	0	0	7	**31**
Electrical distribution	11	200	80	5	2	0	41	**339**
Other electrical appliances	8	32	159	13	2	0	52	**266**
Other	13	168	113	96	28	1	387	**806**
Unspecified	4	27	25	7	3	0	350	**416**
Total	**508**	**442**	**434**	**350**	**169**	**123**	**924**	**2,950**

(p) Provisional data.

In 2021-22, 27% of accidental dwelling fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. In the same year, of the 184 accidental fires in dwellings where the source was recorded as ‘other electrical appliance’, 119 (67%) were due to faulty leads.

Table 25: Number of accidental dwelling(a) fires by cause and source of ignition 2021-22(p)

	Misuse of equipment or appliance	Faulty fuel supply	Faulty appliances or leads	Placing articles too close to heat	Careless handling	Chip pan/ deep fat fryer	Other	**Total**
Smokers materials	2	0	0	9	65	0	12	**88**
Matches and candles	5	0	0	25	14	0	8	**52**
Cooking appliances	399	11	25	134	22	98	18	**707**
Space heating appliances	5	0	8	19	2	0	13	**47**
Central and water heating appliances	0	1	8	0	0	0	2	**11**
Blowlamps, welding and cutting	0	0	0	2	0	0	1	**3**
Electrical distribution	9	112	34	1	1	0	12	**169**
Other electrical appliances	5	20	119	11	0	0	29	**184**
Other	8	5	9	39	16	1	61	**139**
Unspecified	1	6	7	3	0	0	49	**66**
Total	**434**	**155**	**210**	**243**	**120**	**99**	**205**	**1,466**

(a) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(p) Provisional data.

Further data is available on this topic on StatsWales.

Response times

The Response times presented here are based on comparisons between the time that the first vehicle was mobilised and the first vehicle arrived at the scene. This may not be the same vehicle.

Response time data only reflect part of the process of fighting a fire, not the outcome of doing so, and so may not be a reliable measure of the performance of an FRA or the effectiveness of a firefighting response.

The urban geography of the area covered by South Wales FRA is likely to be the cause of the apparent faster response times to fires. Both North Wales and Mid and West Wales FRAs cover large areas of rural and agricultural land. The nature of the road network in these rural areas is likely to be another factor affecting the response times.

Further information about the geography, number of fires stations and population of each FRA are provided in the Quality Information Section.

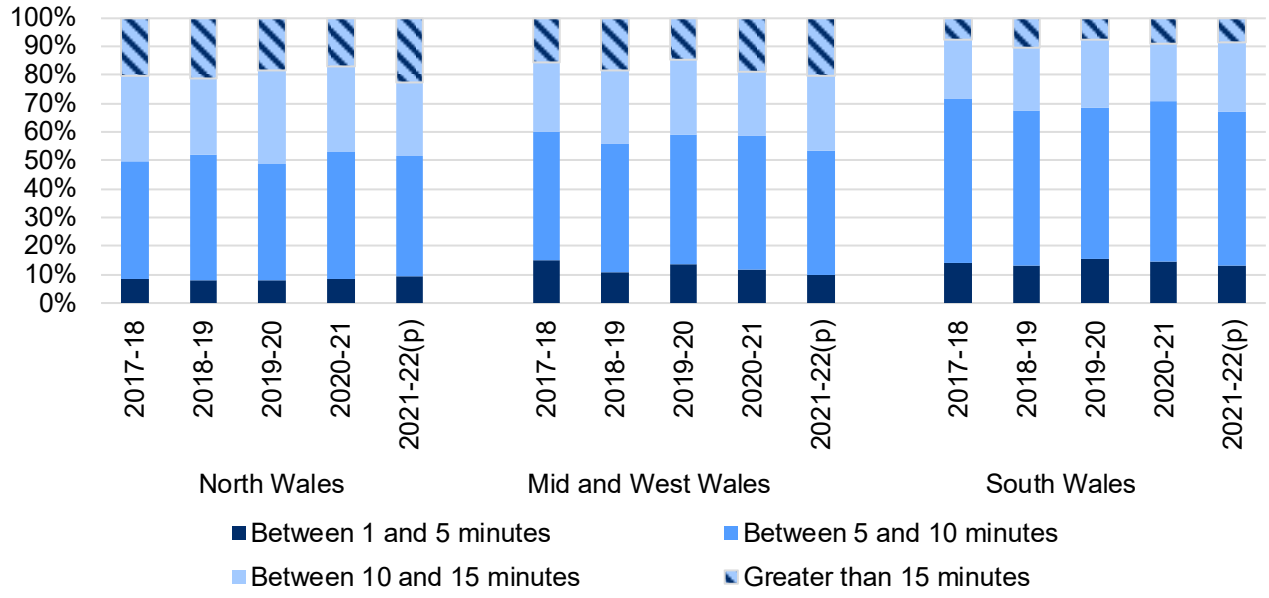
In 2021-22, 52% of primary fires attended in North Wales had a response time of between 1 and 10 minutes. The corresponding percentages in Mid and West Wales and South Wales were 54% and 67% respectively.

Table 26: Percentage of primary fires attended within specified time brackets (a)

	Between 1 and 5 minutes	Between 5 and 10 minutes	Between 10 and 15 minutes	Greater than 15 minutes
2019-20				
North Wales	8	41	33	18
Mid and West Wales	14	46	26	15
South Wales	16	53	24	7
Wales	**13**	**48**	**27**	**12**
2020-21				
North Wales	8	45	30	17
Mid and West Wales	12	47	22	19
South Wales	15	56	20	9
Wales	**13**	**51**	**23**	**14**
2021-22(p)				
North Wales	10	42	26	22
Mid and West Wales	10	44	26	20
South Wales	13	54	24	9
Wales	**11**	**49**	**25**	**15**

(a) This analysis is based on comparisons between the first vehicle was mobilised and the time the first vehicle arrived at the scene. Excluded are late calls, incidents with only heat and smoke damage and response times less than 1 minute or over one hour. In the years shown above, 1% of primary fires in were excluded in each year due to the response time being less than 1 minute or over 1 hour.
(r) Revised data.
(p) Provisional data.

Chart 34: Percentage of primary fires attended within specified time brackets



(p) Provisional data.

In 2021-22, 63% of primary dwelling fires attended in North Wales had a response time of between 1 and 10 minutes; in Mid and West Wales 64% were attended in this time, whilst in South Wales the respective proportion was 76%.

Table 27: Percentage of primary dwelling fires attended within specified time brackets (a)

	Between 1 and 5 minutes	Between 5 and 10 minutes	Between 10 and 15 minutes	Greater than 15 minutes
Dwelling fires(b)				
2019-20				
North Wales	11	53	23	13
Mid and West Wales	16	48	25	10
South Wales	19	58	21	2
Wales	**16**	**54**	**23**	**7**
2020-21				
North Wales	9	54	23	14
Mid and West Wales	17	55	18	10
South Wales	17	65	17	1
Wales	**15**	**60**	**18**	**7**
2021-22(p)				
North Wales	10	53	20	17
Mid and West Wales	12	52	24	12
South Wales	16	60	20	3
Wales	**13**	**56**	**21**	**9**

(a) This analysis is based on comparisons between the time the first vehicle was mobilised and the time the first vehicle arrived at the scene. Excluded are late calls, incidents with only heat and smoke damage and response times less than 1 minute or over one hour. Less than 1% of primary dwelling fires in each year were excluded due to the response time being less than 1 minute or over 1 hour.
(b) Dwellings include caravans, houseboats and other non-building structures used solely as a permanent dwelling
(p) Provisional data.

Great Britain comparisons

In 2021-22 the total number of fires attended rose by 1% in England and 4% in Wales compared with 2020-21. Numbers of primary fires in England increased by 3% whilst Wales saw a 4% rise. Numbers of secondary fires also rose, in England and Wales by 1% and 5% respectively. Currently 2021-22 data are not available for Scotland.

Table 28: Number of fires by type and country

Thousands

	England(a)			Scotland(b)			Wales		
	Total(c)	Primary	Secondary	Total(c)	Primary	Secondary	Total(c)	Primary	Secondary
2012-13	154.5	74.7	72.5	26.7	11.1	14.3	11.4	4.7	5.9
2013-14	171.4	73.2	92.1	28.0	10.5	16.4	13.2	4.8	7.8
2014-15	155.1	71.1	78.8	25.0	10.6	13.4	11.7	4.6	6.5
2015-16	162.3	73.5	84.6	26.6	11.0	14.7	12.1	4.7	7.0
2016-17	162.0	74.9	82.9	27.3	10.9	15.7	10.8	4.8	5.6
2017-18	167.4	74.3	89.0	26.2	10.7	14.7	11.0	4.3	6.3
2018-19	182.9	73.3	106.3	26.8	10.5	15.7	12.9	4.4	8.2
2019-20(r)	154.2	68.8	82.3	24.5	9.9	14.1	10.6	4.3	6.0
2020-21(p)(r)	151.1	61.9	86.1	25.1	9.4	15.1	10.3	3.8	6.2
2021-22(p)	152.6	63.5	86.5	~	~	~	10.7	3.9	6.5

(a) English data are taken from Fire statistics data tables
(b) Scottish data are taken from 'Fire and Rescue Statistics in Scotland'
(c) Includes chimney fires.
(r) Revised data.
(p) Provisional data.
~ Data not available yet.

The fatality rate rose in England to 4.8 per million population. The rate in Wales saw no change compared with 2020-21.

The non-fatal casualty rates in England fell slightly whilst in Wales the rate rose to 154 per million population compared with 2020-21.

Table 29: Number and rate of fatalities and casualties by country

	England(a)				Scotland(a)				Wales			
	Fatal		Non-Fatal		Fatal		Non-Fatal		Fatal		Non-Fatal	
	number	pmp(b)	number	pmp(b)	number	pmp(b)	number	pmp(b)	number	pmp(b)	number	pmp(b)
2012-13	285	5.3	8,429	158	46	8.7	1,319	248	17	5.5	541	176
2013-14	276	5.1	7,819	145	31	5.8	1,310	246	17	5.5	626	203
2014-15	263	4.8	7,596	140	40	7.5	1,099	206	20	6.5	543	176
2015-16	302	5.5	7,672	140	45	8.4	1,276	237	19	6.1	592	191
2016-17	264	4.8	7,103	129	44	8.1	1,266	234	19	6.1	621	199
2017-18	338	6.1	7,302	131	44	8.1	1,116	206	15	4.8	526	168
2018-19	251	4.5	7,165	128	44	8.1	1,197	220	20	6.4	396	126
2019-20(r)	243	4.3	6,935	123	27	4.9	1,027	188	16	5.1	509	161
2020-21(p)(r)	237	4.2	6,362	113	53	9.7	1,017	186	21	6.6	408	129
2021-22(p)	272	4.8	6,307	112	~	~	~	~	21	6.8	479	154

(a) For data sources see table 28.
(b) Per million population. Population data are taken from ONS Mid Year Estimates revised periodically and so rates are subject to change between publications.
(r) Revised data.
(p) Provisional data.
~ Data not available yet.

Glossary

Accidental fires include those where the fire was ignited by accident or the cause was not known or unspecified.

Buildings are defined as all buildings including those under construction, but excluding derelict buildings, or those under demolition. Prior to 1994 'buildings' were referred to as 'occupied buildings'.

The **cause of fire** is the defect, act or omission leading to ignition of the fire.

Chimney fires are reportable fires in occupied buildings where the fire was confined within the chimney structure and did not involve casualties or rescues or are attended by 5 or more appliances.

Deliberate fires include those where deliberate ignition is merely suspected.

Dwellings are defined as buildings occupied by households, excluding hotels, hostels and residential institutions. From 1988, mobile homes have been specifically included in the dwelling count. In 2000, the definition of a dwelling was widened to include any non-permanent structures used solely as a dwelling, such as houseboats. All analyses from 1994 to 1998 relating to dwellings were retrospectively revised to include the new categories of dwellings.

False Alarms are events in which the Fire and Rescue Authority was called to a reported fire which turned out not to exist. False alarms are categorised as follows:

Malicious False Alarms are calls made with the intention of getting the fire and rescue service to attend a non-existent fire-related event, including deliberate and suspected malicious intentions.

Good Intent False Alarms are calls made in good faith in the belief that the fire and rescue service really would attend a fire.

False Alarms Due to Apparatus are calls initiated by fire alarm and fire-fighting equipment operating (including accidental initiation of alarm apparatus by persons)**.**

Fatal casualty (fire related) is a person whose death is attributed to a fire even if the death occurred weeks or months later. There are also occasional cases where it becomes apparent subsequently that fire was not the cause of death. The figures for fatalities are thus subject to revision.

Fire Data Reports (FDR1 and FDR3) were the method of data collection via paper forms prior to the Incident Recording System (introduced in April 2009). FDR1 was used to record primary fires, FDR3 for secondary fires, chimney fires and false alarms.

Fire and Rescue Authorities (FRAs) are the statutory bodies which oversee the policy and service delivery of a fire and rescue service. The three authorities in Wales are North Wales, Mid and West Wales and South Wales.

Heat or smoke damage only incidents are reportable fires where there is no flame damage. The damage reported may be due to any combination of heat, smoke and other which will include any water damage.

Incident Recording System (IRS) is the electronic based system for recording fires, false alarms and Special Service Incidents. IRS replaced the FDR1 and FDR3 paper forms in April 2009.

Late fire call is a fire known to be extinguished when the call was made (or to which no call was made, e.g. a fire which comes to the attention of the Fire and Rescue Authority) and which the Fire and Rescue Authority attended.

Location is the type of premises, property or countryside in which the fire started. This is not necessarily the type of premises in which most casualties or damage occurred as a result of the fire.

Non-fatal casualties are recorded as being in one of four classes of severity as follows:

(i) Victim went to hospital, injuries appear to be serious

(ii) Victim went to hospital, injuries appear to be slight

(iii) First aid given at scene

(iv) Precautionary check recommended – this is when an individual is sent to hospital or advised to see a doctor as a precaution, having no obvious injury or distress.

Non-fatal casualties marked as 'not fire-related' have not been excluded due to widespread inappropriate use of this field.

Primary fires include all reportable fires in non-derelict buildings, vehicles and outdoor structures or any fire involving casualties, rescues, or fires attended by five or more appliances.

Reportable fire is an event of uncontrolled burning involving flames, heat or smoke and which the fire and rescue authority attended.

Secondary fires are the majority of outdoor fires including grassland and refuse fires unless they involve casualties or rescues, property loss or five or more appliances attend. They include fires in single derelict buildings. They are reported in less detail than other fires and consequently less information concerning them is available.

The **source of ignition** is the source of the flame, spark or heat that started the fire.

Special Service Incidents - Non-fire incidents which require the attendance of an appliance or officer and include:

(a) Local emergencies e.g. road traffic incidents, rescue of persons, 'making safe' etc;

(b) Major disasters;

(c) Domestic incidents e.g. water leaks, persons locked in or out etc;

(d) Prior arrangements to attend incidents, which may include some provision of advice and inspections.

Where more than one activity is carried out, the incident is recorded under the most resource intensive part or what was the most appropriate e.g. a railway incident with persons trapped is likely to be recorded under ‘railway accident’ even though the FRA may be involved in ‘first aid’, ‘other rescue’ and possibly ‘making safe’.

Key quality information

The analysis in this bulletin relates to fire and rescue service incidents between April 2021 and end March 2022 whilst making comparisons with April 2020 to March 2021 a period largely effected by the Coronavirus (COVID-19) pandemic, and therefore the public health restrictions that were in place during the course of the pandemic. Whilst restrictions were eased during 2021-22 there were some periods during the year when restrictions remained in place and patterns of behaviour may not have returned to that occurring prior to the pandemic.

On 10 November 2004 the Fire and Rescue Services Act 2004, which devolved fire and rescue services to the National Assembly for Wales (now the responsibility of the Welsh Government), was brought into effect. In Wales, these services are provided by three Fire and Rescue Authorities (FRAs). The three FRAs cover varied geographical areas with a wide variety of risks including: fires in homes; outdoor fires; fires in business premises; road traffic collisions; rail or air crashes; chemical spills; building collapses; and trapped people or animals.

North Wales Fire and Rescue Authority provides cover for a population of almost 700,000 across a geographical area of 2,400 square miles. It employs almost 900 operational and non-operational support staff from its headquarters and its 44 fire stations.

Mid and West Wales Fire and Rescue Authority covers over half the area of Wales and a population of almost 900,000. There are 58 fire stations and over 1,300 employees.

South Wales Fire and Rescue Authority serves a population of over 1.5 million people covering 1,085 square miles. It employs around 1,700 staff including over 1,300 fire-fighters who operate from 47 fire stations throughout South Wales.

Relevance

The Welsh Government uses the information in this bulletin to monitor the trends in fires occurring in Wales and provides information on FRAs' performance and activities to citizens and communities in Wales. This helps to monitor the effectiveness of current policy, and for future policy development. The data are also used as evidence for national fire safety initiatives and campaigns.

The data are used by the fire and rescue services for comparisons and benchmarking. The data aids the allocation of resources and the provision of community safety projects.

Accuracy

Since April 2009 incident data (relating to fires, false alarms and Special Service Incidents) have been submitted by the Fire and Rescue Authorities via the Incident Recording System (IRS). On 5 January 2016 responsibility for fire and rescue policy in England transferred from the Department for Communities and Local Government (CLG) to the Home Office, this resulted in IRS also being held by the Home Office (although there has been no change to the data collected). IRS records data submitted by FRAs in England, Scotland and Wales but does not currently collect data from FRAs in Northern Ireland.

Prior to IRS data were collected via the paper based forms FDR1 and FDR3. The change in collection method has allowed a greater volume of data to be captured:

- Data on Special Service Incidents are now recorded
- All fires are recorded; pre-IRS statistics were based on a sampled dataset.
- Some detail on secondary fires and chimney fires are now recorded; pre-IRS, only aggregates were available.

For further details of the information collected and held on IRS please see 'Further details' on page 57.

The incident data are extracted from IRS annually (usually around June/July) and marked provisional at first publication. All bulletins and StatsWales tables excluding the quarterly data published in January/February are based on this dataset. Due to the nature of the live system, whilst accurate at the time of extraction, totals may change and therefore be revised due to updated information. 2021-22 data are currently marked as provisional and may be revised in future publications.

The table below compares the provisional 2020-21 data which was published in September 2021 with the revised data detailed in this bulletin.

Comparison of provisional data with revised data (2020-21)

	Provisional 2020-21 (published Sep 2021)	Revised 2020-21 (published Sep 2022)	Percentage change
All Fires and fire false alarms	**25,208**	**25,202**	**0.0**
All fires	10,328	10,326	0.0
Primary Fires	3,796	3,796	0.0
Secondary	6,199	6,197	0.0
Fire false Alarms	14,880	14,879	0.0
Fatalities	21	21	0.0
Non Fatal Casualties	408	408	0.0

In earlier releases we have included a table showing a time series of the year on year revisions. . The table tends to show that the extent of revisions has been much lower in recent years.

A key piece of information that the IRS collects for all incidents is the accurate incident location. For all incidents it is mandatory to have the grid location (easting and northing co-ordinates), in addition for addressable locations the address details can be recorded.

Within the IRS forms system, for addressable locations the user locates the address using a gazetteer and this determines the co-ordinates. For non-addressable locations the user will either select the location on a map or use a mobile data terminal to determine the location.

Rounding and symbols

Data collected via the FDR1 and FDR3 paper forms (i.e. data prior to 2009-10) are based on sampled datasets. Items and totals have been rounded separately to the nearest final digit, and therefore totals shown may differ slightly from the sum of the items. No rounding has been applied to data from 2009-10 onwards.

The following symbols may have been used in this release:

- negligible (less than half the final digit shown)

. not applicable

.. not available

~ not available yet

* disclosive or not sufficiently robust for publication

p provisional

r revised

Timeliness and punctuality

All outputs adhere to the Code of Practice by pre-announcing the date of publication. Furthermore, should the need arise to postpone an output this would follow the Welsh Government's Revisions, Errors and Postponements arrangements.

This bulletin is usually published in the August around 5 months after the year end. However, publication has been delayed this year (and was last year) due to the Coronavirus (Covid-19) pandemic impacting resources available in Fire and Rescue Services as well as Welsh Government analytical services

Accessibility and clarity

Welsh fire statistics are published in an accessible, orderly, pre-announced manner on the Welsh Government website at 9:30am on the day of publication. All releases are available to download for free.

In our outputs, we aim to provide a balance of commentary, summary tables, charts and maps. The aim is to 'tell the story' in the output, without the output becoming overly long and complicated. We provide additional, detailed data on StatsWales.

Comparability and coherence

Since 2009-10 the three Fire and Rescue Authorities have recorded all their fire incidents using the IRS. This may affect some of the incident categories especially when data are compared with years prior to 2009-10. Following a quality assurance exercise carried out by CLG on the 2009-10 and 2010-11 two possible discontinuities (due to the change in data collection method) were discovered. One relates to types of incident, notably outdoor primary fires and the second to non-fatal casualties. More information is given on this subject in the Comparability section of 2015-16 Fire Statistics publication (found in the previous releases link).

Numbers of non-fatal casualties presented in this bulletin include those recorded as 'not fire related'. This is the result of an exercise CLG undertook which found that the 'not fire related' casualty marker had been widely misused. Data published by the Home Office for England and the Scottish Fire and Rescue Service for Scotland also include these casualties. However the second

performance indicator (FRS/RRC/S/002) listed in Fire and Rescue Authority performance 2017-18 exclude those casualties and so the data are not directly comparable.

The Fire Statistics Quality Report covers the general principles and processes leading up to the production of our fire statistics. The report covers various topics including definitions, coverage, timeliness, relevance and comparability. You can see a copy of the report on the Welsh Government website.

General Data Protection Regulation (GDPR)

In order to comply with the new data protection regulations, we have published a privacy notice in relation to personal information collected by the Fire and Rescue Services when attending incidents.

UK comparisons

Whilst England and Scotland do not publish specific grassland fires bulletins, data by location are available in their annual publications.

Data for England (published by the Home Office since April 2016):

- Fire statistics England
- Fire statistics monitor

Data for Scotland (published by Scottish Fire and Rescue Service since 2015) – not currently badged as national or official statistics.

- 2020-21 data
- Pre 2014-15 data (published by the Scottish Government)

Limited Northern Ireland data are available in an annual report from Northern Ireland Fire and Rescue Service.

National Statistics status

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Statistics.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics

status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

The statistics last underwent a full assessment against the Code of Practice in June 2012 (Report number 208).

Since the review by the UKSA, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- Inclusion of response time data
- Inclusion of GB comparison data
- Increased the length of time series where possible
- Publication of data tables in Excel alongside the bulletin.
- More detailed data at regional (Local Authority) level
- Improved Key Quality information.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the Well-being of Wales report.

Further information on the Well-being of Future Generations (Wales) Act 2015.

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

Further details

The document is available on the Welsh Government website.

Fire Statistics Data Quality Report

Fire Statistics Guidance

More information is available in the form of StatsWales tables that accompany this release.

More detailed analysis will be published in the forthcoming output Grassland fires 2020-21.

Next update

Data for selected StatsWales tables for the period April to September 2022 will be published in February 2023.

Fire and Rescue Incident Statistics 2022-23 due to be published in September 2023

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to stats.inclusion@gov.wales.

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