ystadegau ar gyfer cymru statistics for wales

Statistical Bulletin

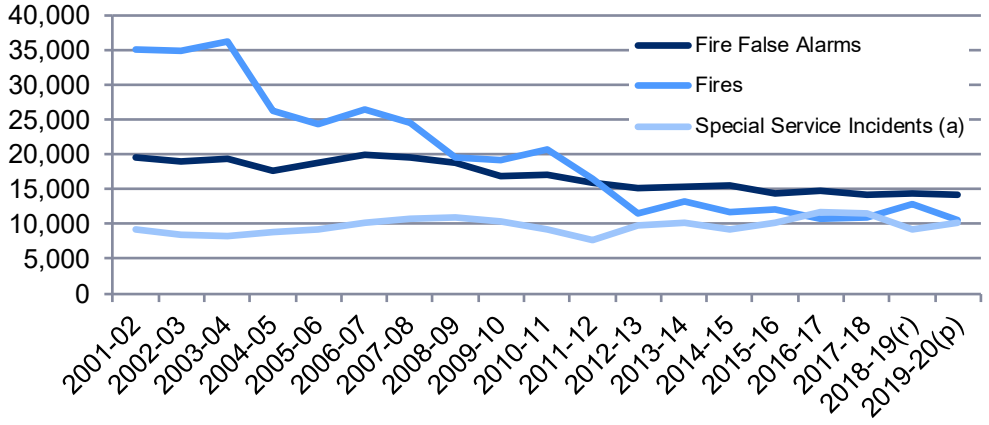
Llywodraeth Cymru Welsh Government

Fire and rescue incident statistics 2019-20

26 Nov 2020
SB 38/2020

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 2019-20, where the 2019-20 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 by 70%, and by 45% over the last 10 years. However in recent years the trend has become less clear with numbers staying around the 11,000 to 13,000 mark. The number of fire false alarms has also fallen but to a lesser extent, only decreasing by 27% since 2001-02. Numbers of SSIs have fluctuated throughout the time series, the 2019-20 figure is 10% higher than in 2001-02 (chart 1), but 2% lower than 10 years ago.
- Compared with 2018-19, numbers of fires fell by 18% in 2019-20; a 27% decrease in secondary fires being the main driving force.
- There were 17 fatal casualties from fires in Wales in 2019-20 (table 8).
- There were 507 non-fatal casualties in 2019-20, an increase of 28% compared with 2018-19 (table 9). The increase is due to a rise of 45% in those people receiving first aid or sent for precautionary checks.
- There were 1,686 deliberate grassland, woodland and crop fires in 2019-20, a decrease of 41% compared with 2018-19.

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.

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 2019-20 Welsh FRAs attended 34,949 incidents (fires, fire false alarms, SSIs and SSI false alarms), a decrease of 5% compared with 2018-19 and the third consecutive year to see a fall. Of all attendances 10,585 (30%) were at fires, of which 4,277 were primary fires (12%), 5,978 secondary fires (17%) and 330 chimney fires (1%). There were also 14,257 fire false alarm incidents (41% of attendances) and 10,107 SSIs including SSI false alarms (29%).

Since 2001-02 all types of attendances except SSIs have fallen; numbers of primary fires falling by 66%, secondary fires by 72%, chimney fires by 63% and fire false alarms by 27%. Numbers of SSIs have varied since 2001-02; overall there has been an increase of 10% since 2001-02, but 13% lower than the peak seen in 2016-17 (see pages 34 – 35).

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 22 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**
2010-11	17,006	6,414	13,503	771	9,187	**46,881**
2011-12	15,874	5,687	10,162	615	7,659	**39,997**
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(r)	14,485	4,392	8,184	335	9,278	**36,674**
2019-20(p)	14,257	4,277	5,978	330	10,107	**34,949**
Percentage change 2018-19 to 2019-20	-2	-3	-27	-1	9	**-5**

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

In both North Wales and South Wales the largest category of incident type were fire false alarms (over two fifths of attendances). However in Mid and West Wales SSIs made up the largest category.

Incidents attended in 2019-20, by Fire and Rescue Authority(p):

Chart 2a: North Wales

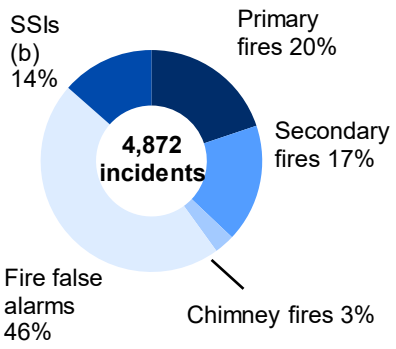


Chart 2b: Mid and West Wales

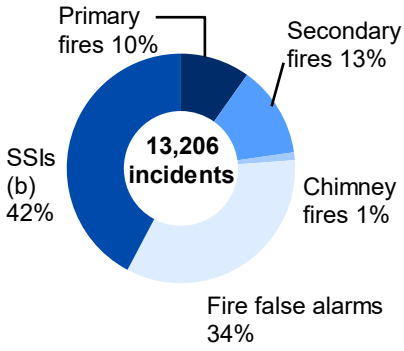
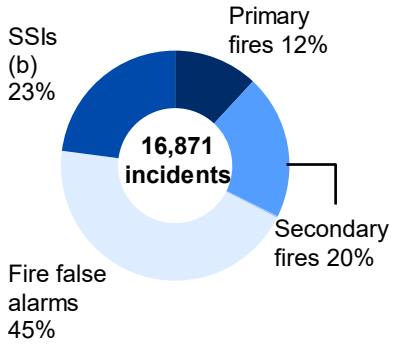


Chart 2c: South Wales (a)



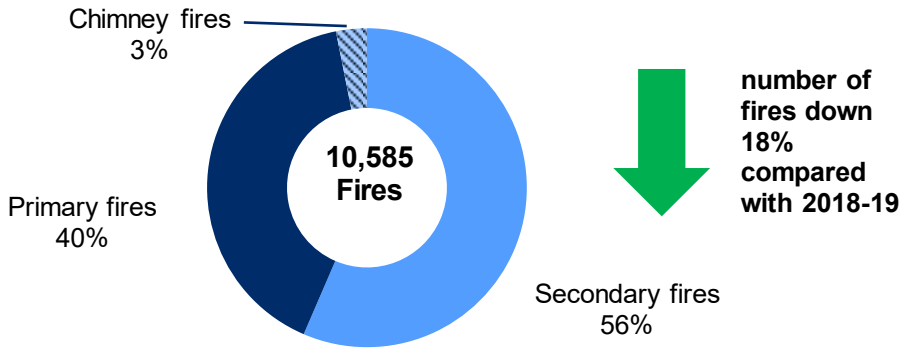
(a) The 39 chimney fires in South Wales equated to less than 0.5% of incidents in the region in 2019-20.
(b) SSI data include numbers of SSI false alarms.
(p) Provisional data.

Fires

In 2019-20 there were 10,585 fires attended in Wales, a decrease of 18% compared with 2018-19. Since 2001-02 the number of fires has fallen by 70%.

In 2019-20 secondary fires accounted for 56% of all fires, primary fires accounted for 40% and chimney fires 3%. In recent years secondary fires have accounted for fewer than 6 in 10 fires each year; since 2012-13 only 2018-19 saw secondary fires accounting for more than 60% of fires.

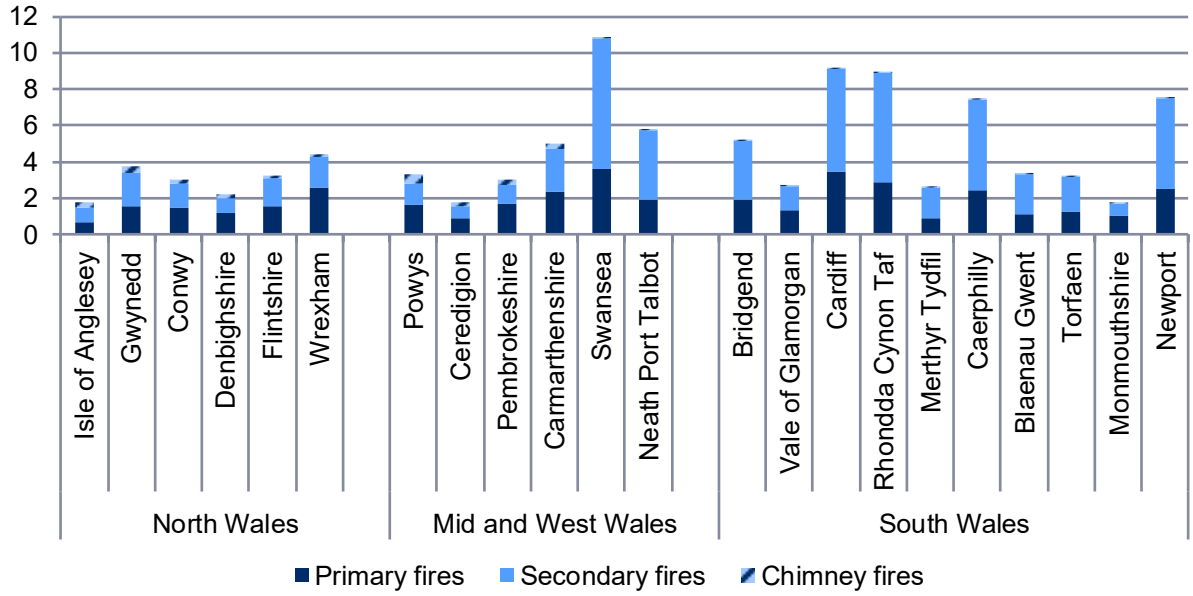
Chart 3: Fires by fire type as a percentage of all fires, 2019-20(p)



(p) Provisional data.

In 2019-20, Swansea accounted for 11% fires in Wales, whilst Cardiff and Rhondda Cynon Taf each had 9% of the total. 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, 2019-20(p)



(p) Provisional data

Further data on this topic is available on StatsWales

Fires by type

Primary fires

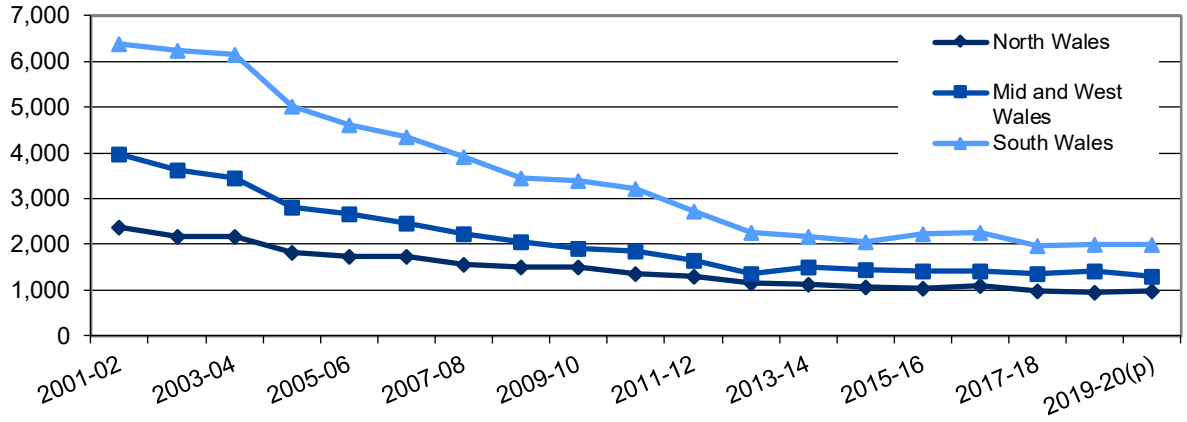
In 2019-20 provisional figures show the number of primary fires decreased by 3% compared with the previous year, to 4,277 (the lowest number in the time series). Only North Wales saw an increase (1%) in the number of primary fires; Mid and West Wales saw a decrease of 9% whilst South Wales saw no change.

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2010-11	1,348	1,862	3,204	**6,414**
2011-12	1,307	1,648	2,732	**5,687**
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(r)	959	1,422	2,011	**4,392**
2019-20(p)	967	1,299	2,011	**4,277**
Percentage change 2018-19 to 2019-20	1	-9	0	**-3**

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

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



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

Since 2001-02 both Mid and West Wales and South Wales have seen falls around two-thirds in the number of primary fires. In North Wales the number has fallen by 59%. The FRAs in Wales have a number of ongoing fire safety campaigns[1] and community fire safety work (such as home safety

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

checks and school visits[2]) and these may be a contributory factor in the overall falling numbers of fires although no all-Wales evidence is currently available.

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

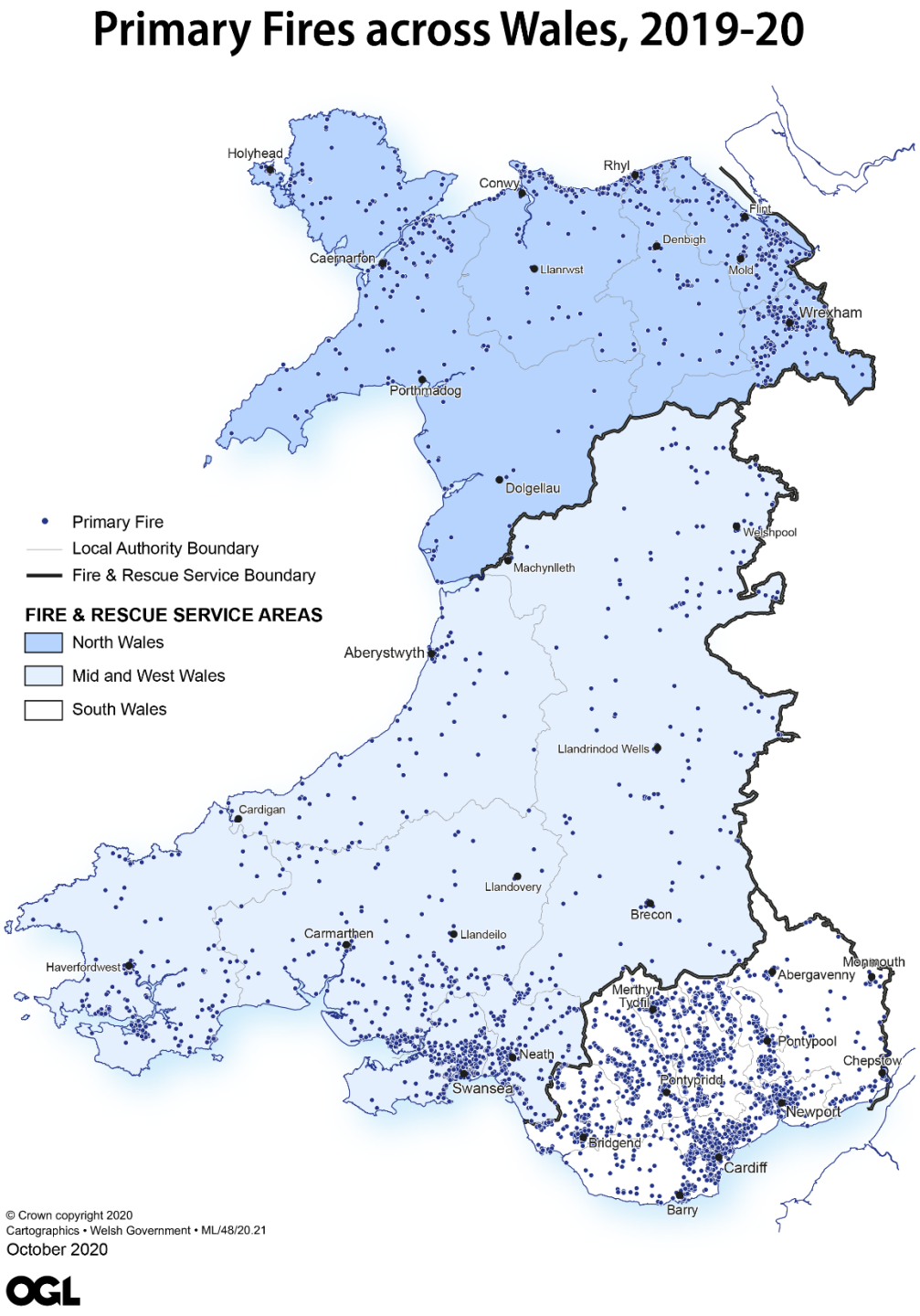


Table 3: Number and percentage of primary fires by location(a)

	Dwellings (b)		Other buildings		Road vehicles		Outdoors	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2010-11	2,108	33	1,423	22	2,216	35	667	10
2011-12	2,022	36	1,159	20	1,820	32	686	12
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(r)	1,555	35	881	20	1,485	34	471	11
2019-20(p)	1,627	38	869	20	1,439	34	342	8
Percentage change 2018-19 to 2019-20	5	.	-1	.	-3	.	-27	.

(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

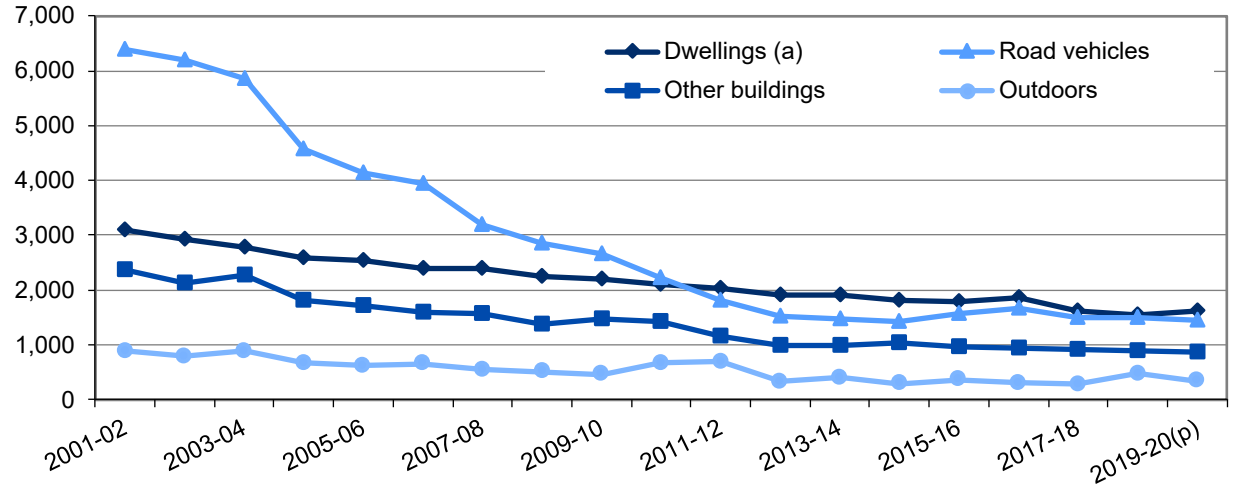
In Wales in 2019-20, 38% of all primary fires were in dwellings, 34% in road vehicles, 20% in other buildings and 8% were outdoor fires. All location types except dwellings saw decreases in the number of primary fires, with other buildings by 1%, road vehicle fires by 3% and outdoors by 27%. Numbers of primary dwelling fires increased by 5% and was mainly due to an increase in those occurring accidentally; more analysis of fires by motive can be found on pages 17-22.

In 2019-20 the number of dwelling fires was almost half the figure seen in 2001-02 (chart 6). In recent years FRAs have targeted their programmes of Home Fire Safety Checks (HFSCs)[3] at dwellings with identified risk factors (e.g. age, sensory/mobility impairment, domestic violence etc.) In 2018-19 FRAs in Wales completed over 51,000 HFSCs, with 96% occurring in properties with at least one risk factor[4]. Almost 1,800 further HFSCs were completed by non-FRA organisations.

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 over three quarters since 2001-02. More analysis of fires in road vehicles can be found in the section 'Fires by motive' (page17).

[3] Home Fire Safety Check StatsWales tables
[4] 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 56% of those attended in 2019-20. In 2019-20 numbers of secondary fires decreased by 27% compared with 2018-19. All 3 FRSs saw large decreases in secondary fires as seen in table 4.

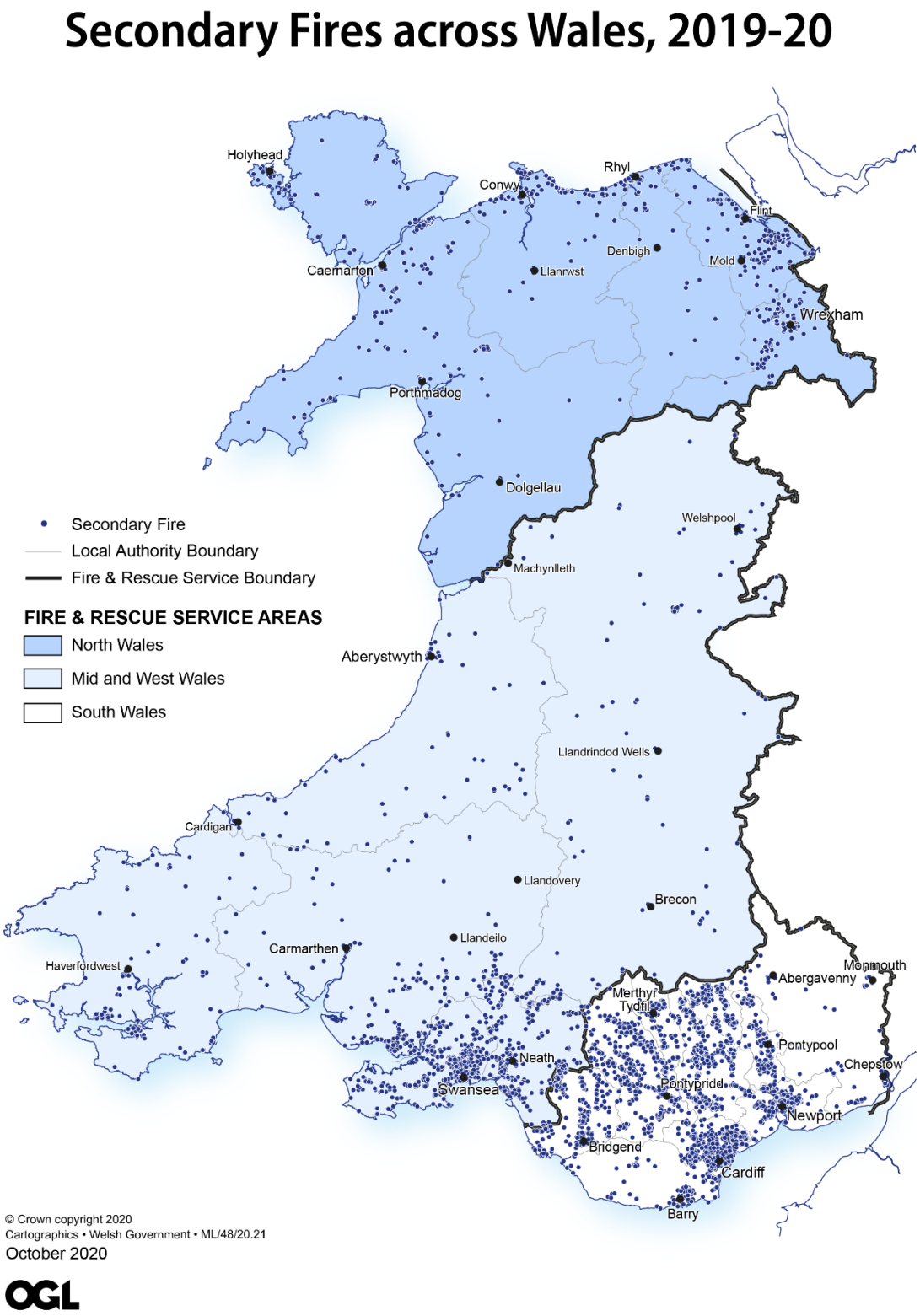
Numbers of deliberate fires are explored in more detail in the section 'Fires by motive' (page 17).

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2010-11	1,626	3,426	8,451	**13,503**
2011-12	1,625	2,610	5,927	**10,162**
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(r)	1,175	2,170	4,839	**8,184**
2019-20(p)	838	1,705	3,435	**5,978**
Percentage change 2018-19 to 2019-20	-29	-21	-29	**-27**

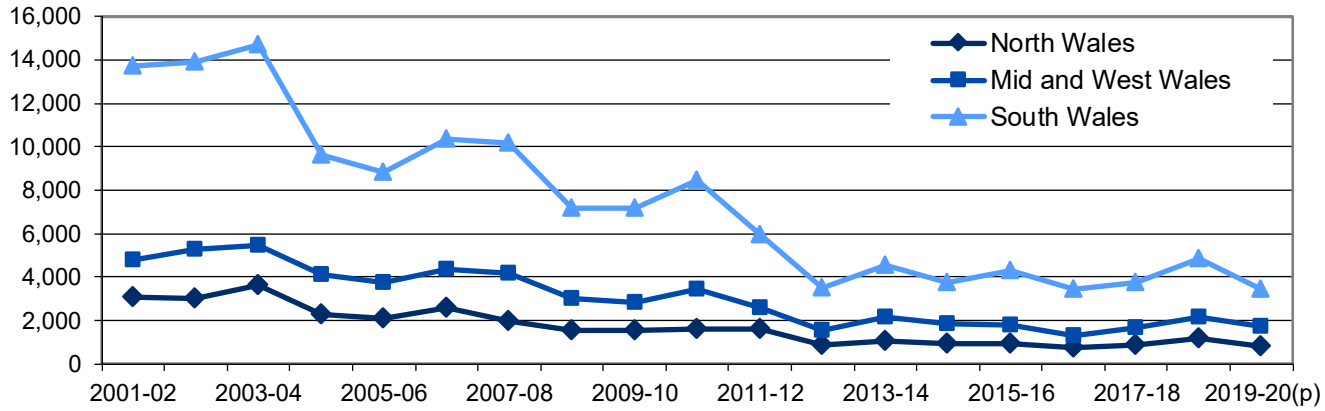
(a) Data from 2001-02 onwards are available on StatsWales and in the accompanying Excel tables.
(r) Revised data.
(p) Provisional data.

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



Provisional figures show the Welsh FRAs attended 5,978 secondary fires in 2019-20, a decrease of 27% on 2018-19. This is the lowest number of secondary fires since 2016-17 and the largest year on year decrease since 2012-13 when numbers fell by 42% compared with the previous year. Compared with the previous year, all Welsh FRAs saw decreases. Numbers of secondary fires in all 3 Welsh FRAs have seen substantial falls since 2001-02; 73% in North Wales, 65% in Mid and West Wales and 75% in South Wales. In South Wales secondary fires accounted for 63% of fires in the area in 2019-20. In North Wales and Mid and West Wales the proportions were 43% and 54% respectively.

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



(r) Revised data
(p) Provisional data

In 2019-20, the majority of secondary fires (57%) occurred in South Wales. Mid and West Wales accounted for 29% of all secondary fires and 14% were in North Wales.

Grassland fires: In 2019-20, 2,077 (35% of) secondary fires occurred on grassland, woodland, cropland[5], whilst 48% occurred on 'other land'. The number of grassland fires saw a large decrease compared with 2018-19, by 45% whilst numbers of fires on 'other land' also fell, by 15%. 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 which may suggest the impact that the FRS-run schemes and initiatives have had a positive effect. 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 2%.

Refuse fires: In 2019-20, 57% of secondary fires were classed as refuse fires[6]. The number of these fires fell by 11% from 3,803 in 2018-19 to 3,379 in 2019-20. Overall there has been a downward trend in refuse fires, falling by 34% 2009-10. In recent years numbers of refuse fires have been rising, however this latest decrease takes the number to its lowest since 2015-16. As

[5] 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
[6] Data on refuse fires can be found in StatsWales table 'Fires by detailed location and motive'

with other outdoor fires, numbers are likely to be affected by weather conditions. Almost 8 in 10 refuse fires in 2019-20 occurred on loose refuse. A number of projects including 'Tidy Towns[7]' and 'Fly Tipping Action Wales[8]' are attempting to address the issues of litter and fly-tipping. In 2018-19, the number of fly-tipping incidents (recorded by local authorities) in Wales decreased slightly, by 1% compared with the previous year, and is 36% lower than in 2006-07. Keep Wales Tidy is also aiming to prevent litter from occurring through education and awareness raising via the Eco-schools programme[9]. 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 2019-20, there were 330 chimney fires in Wales, a decrease of 1% compared with 2018-19. The majority of these fires occurred in dwellings (97%).

Only South Wales FRA saw a decrease in the number of chimney fires, of 19%; North Wales saw no percentage change whilst Mid and West Wales saw an increase of 3% on 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**
2010-11	325	337	109	**771**
2011-12	254	260	101	**615**
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(r)	145	142	48	**335**
2019-20(p)	145	146	39	**330**
Percentage change 2018-19 to 2019-20	0	3	-19	**-1**

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

[7] Keep Wales tidy – tidy towns
[8] Fly-tipping Action Wales
[9] Keep Wales Tidy – Eco schools

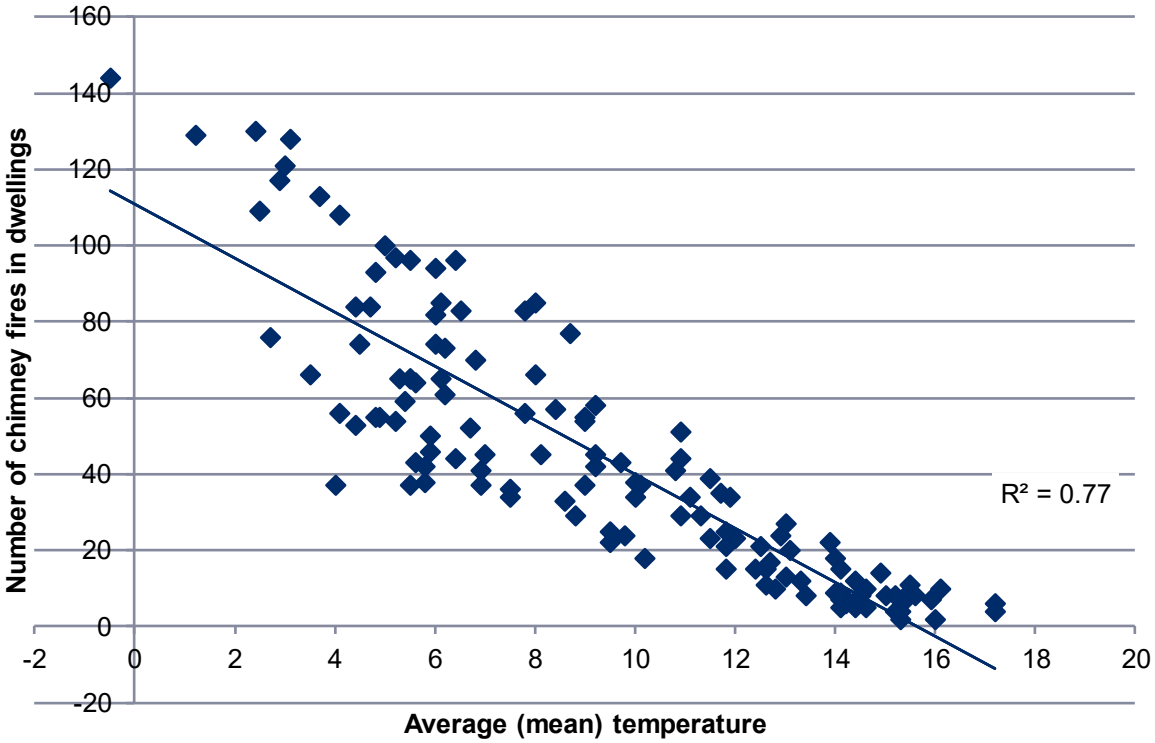
Statistical analysis of chimney fire and temperature data

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 2019-20. The R^2 value of 0.77 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

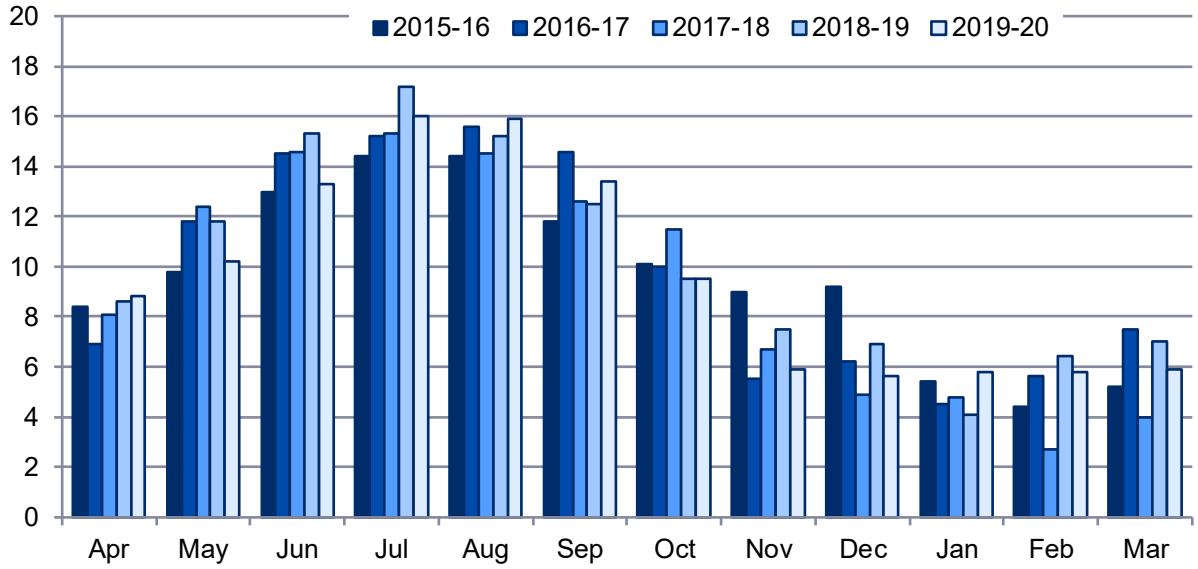


Source: Mean temperature data from the Met Office

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

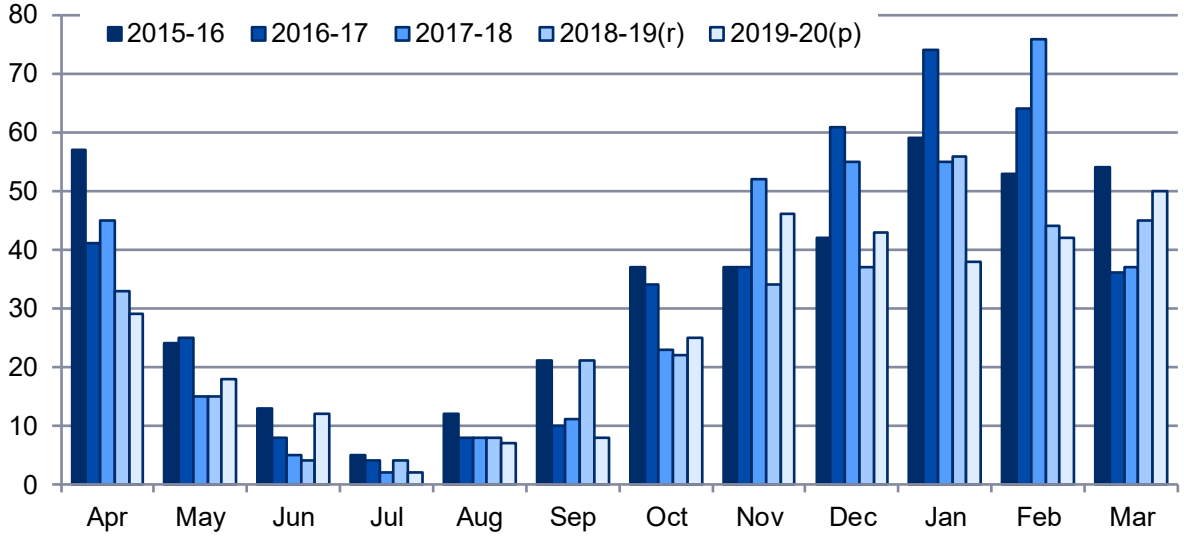
As might be expected, the number of chimney fires in dwellings is higher in the winter and colder months, for example in the charts 8b and 8c we see that Feb 2018 was relatively cold and saw more chimney fires in comparison to February in the other years shown. Conversely March 2017 saw the highest temperature for March (of those shown) and corresponds to the fewest number of chimney fires. 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[10]

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



(p) Provisional data

Further data on this topic is available on StatsWales.

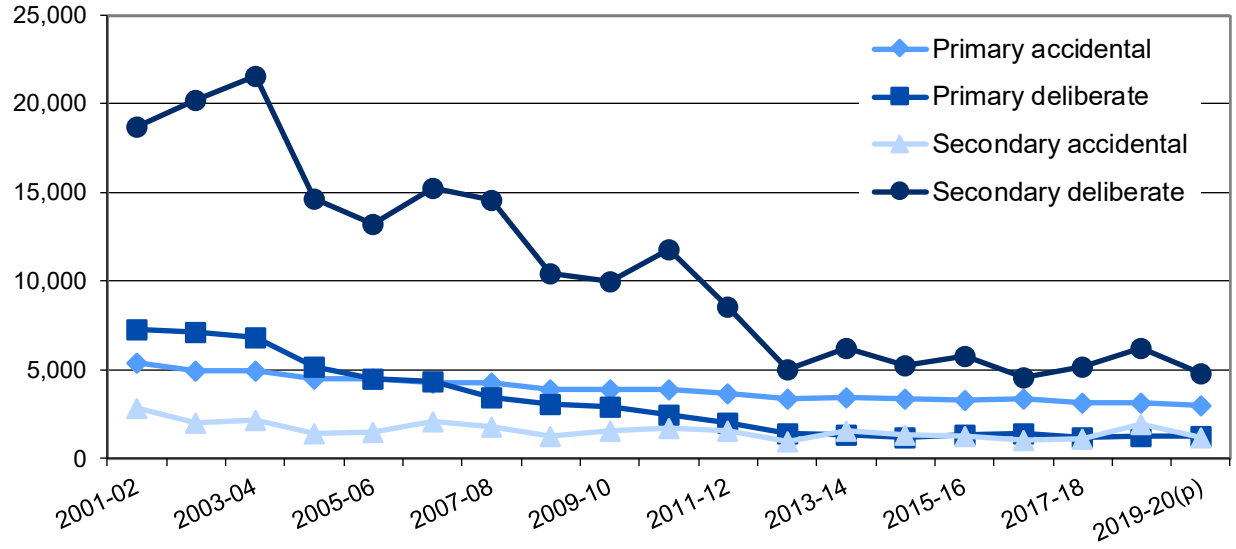
[10] Met Office datasets

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.

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

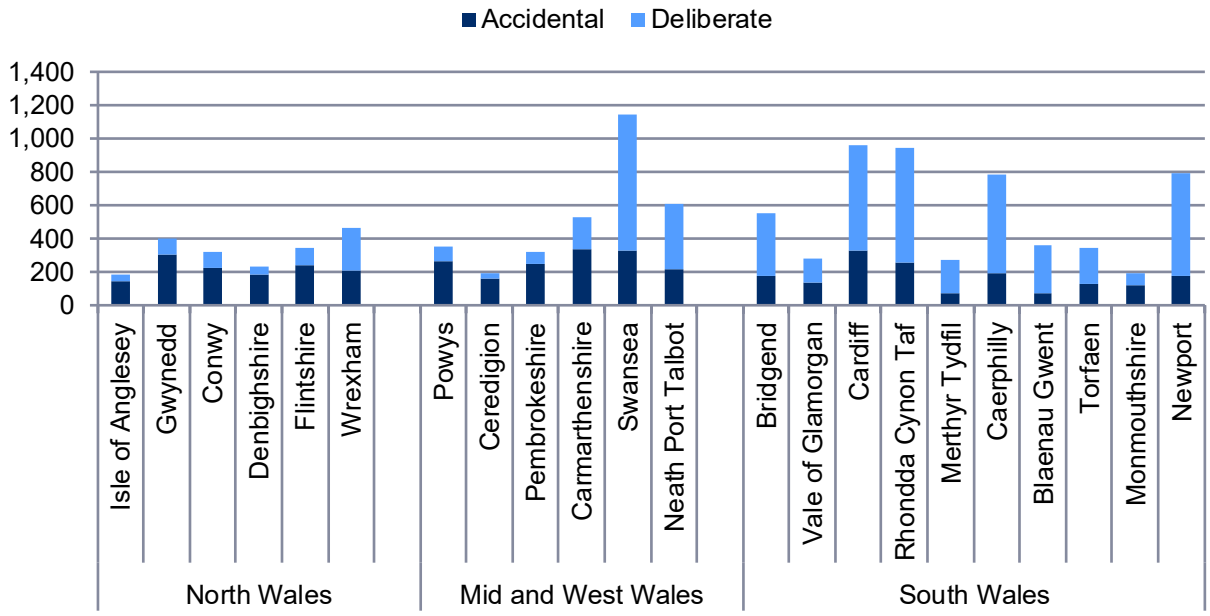
Chart 9: Number of fires by type and motive



(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.

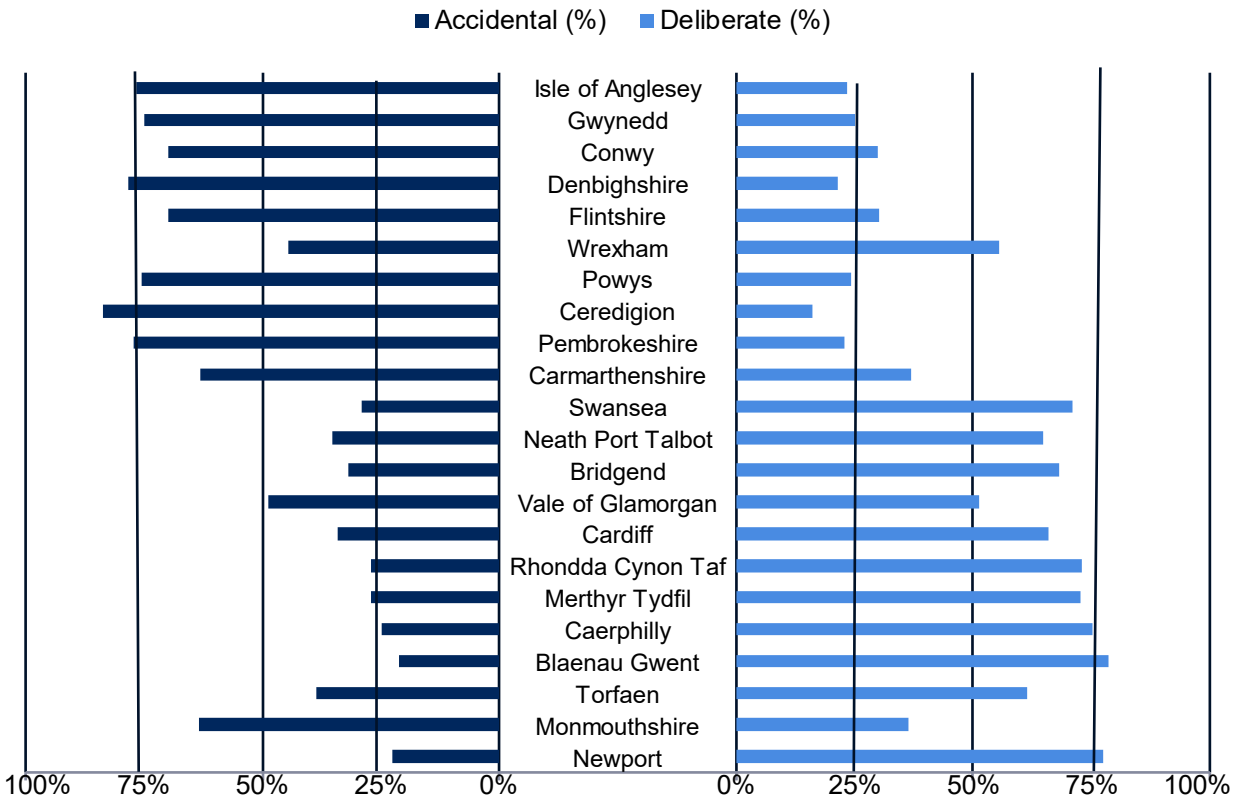
Chart 10: Number of accidental and deliberate fires by Local Authority 2019-20(p)



(p) Provisional data

Chart 11 further shows that in 2 local authorities (Blaenau Gwent and Newport) over 75% of fires were started deliberately, (where Blaenau Gwent has the highest percentage at 79%). Ceredigion had the lowest percentage of fires which were started deliberately at 16%.

Chart 11: Percentage of accidental and deliberate fires by Local Authority 2019-20(p)



Accidental fires

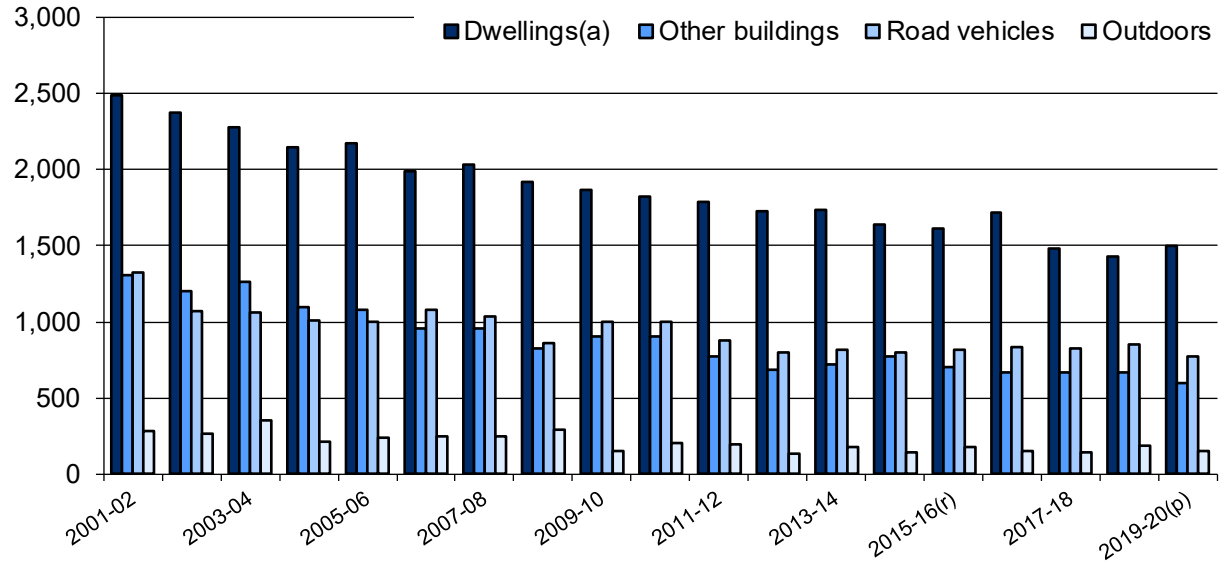
In 2019-20, there were 4,531 accidental fires, the lowest number in the available time series (since 2001-02). The number fell by 16% compared to the previous year, (equating to 857 fewer accidental fires), and since 2001-02 the number has fallen by 50%. Accidental fires accounted for 43% of all fires attended in 2019-20, around the same proportion as in earlier years. 71% of all primary fires and 20% of secondary fires were accidental. Almost all chimney fires in 2019-20 were accidental. More data on accidental fires can be found on StatsWales.

In 2019-20 the number of accidental primary fires decreased by 4% whilst the number of accidental secondary fires fell by 38% (compared with 2018-19). The decrease in accidental secondary fires is almost solely due to a fall in the number occurring outdoors.

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 5% to 1,497 in 2019-20; despite this increase it 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 40%. Most dwelling fires (92%) started accidentally in 2019-20 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 42%, and in 2019-20 the number fell by 10% (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.
(r) Revised data.
(p) Provisional data.

In 2019-20 only Mid and West Wales saw a decrease in the number of accidental primary fires in dwellings compared with the previous year, as shown in table 6. North Wales and South Wales both saw an increase.

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**
2010-11	469	605	752	**1,826**
2011-12	476	555	758	**1,789**
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(r)	327	528	575	**1,430**
2019-20(p)	356	460	681	**1,497**
Percentage change 2018-19 to 2019-20	9	-13	18	5

(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.

Around a third of accidental dwelling fires occurred between the hours of 6pm and 10pm[11]. Analysis from page 42 to 46 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

[11] Data on time of accidental dwelling fires can be found in the StatsWales table 'Fires and casualties by time'

dwelling fires in 2019-20. In 9% of accidental dwelling fires alcohol or drugs were recorded as a contributory factor to the start of the fire.

There was a 22% decrease in primary accidental outdoor fires from 190 in 2018-19 to 149 in 2019-20; over four fifths occurred in South wales, around a third in Mid and West Wales and almost a quarter 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[12]. 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 (not currently National Statistics) published by the Office for National Statistics[13], offences against vehicles in Wales have fallen by 75% and thefts or unauthorised taking of vehicles have fallen by 77% between 2002-03 and 2019-20. However in 2019-20 vehicle theft saw a slight increase (1%) compared with 2018-19, the fourth annual increase in a row. Deliberate primary fires in road vehicles have seen some fluctuation in recent years, and in 2019-20 increased by 6% compared with 2018-19.

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. The Fire Service in North Wales, in conjunction with North Wales Police and the British Transport Police, launched a deliberate fires awareness campaign in March 2016. The theme of the campaign is to encourage fire and potential fire starters to think about the consequences of deliberately starting grass and mountain fires.

More intensive programmes such as 'Crimes and Consequences' and 'Phoenix' operate throughout the year and across Wales.

Over 114,000 children and young people received Fire Safety talks[14] at school in 2018-19.

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.

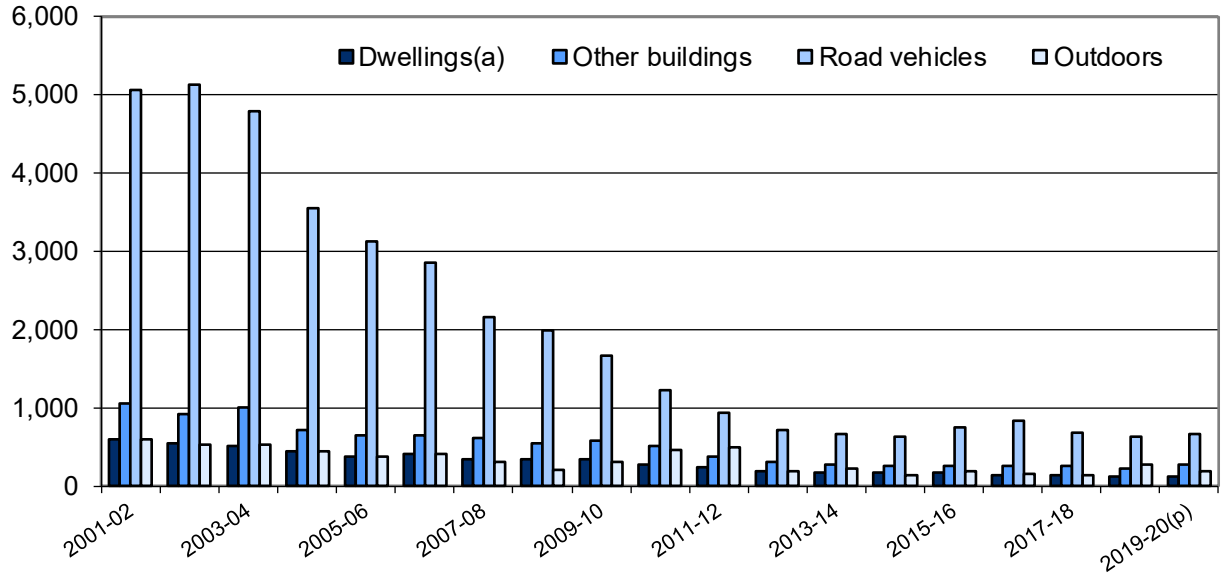
[12] Wales Arson Reduction Strategy
[13] ONS Crime Statistics 2019-20
[14] StatsWales table - Children and Young People Interventions by Participant and Interventions

There were 1,261 deliberate primary fires in 2019-20, 2 more fires than in 2018-19 but 83% fewer than in 2001-02. Deliberate primary fires accounted for 29% of all primary fires in 2019-20.

Grassland, woodland and crop fires continue to be a focus of many of these programmes. In 2019-20 there were 1,686 deliberately set grassland fires, a fall of 41% compared with 2018-19. Of these 1,686 fires, 95% were secondary fires.

While over half of all deliberate primary fires in 2019-20 occurred in road vehicles, the numbers of such fires have reduced substantially since 2001-02 (by 87%).

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 2019-20, there were 4,792 deliberate secondary fires, a decrease of 23% on the previous year and the second lowest in the time series. This equates to four fifths of secondary fires being set deliberately.

52% of all deliberate secondary fires were classed as 'Other outdoors (including land)' in 2019-20 (up from 46% in 2018-19), however the number of these fires fell by 14% compared with the previous year. The majority of these fires (94%) occurred on loose refuse.

Fires on grassland, woodland or crops accounted for 34% of deliberate secondary fires in 2019-20 and numbers of these fires fell by 40% compared with the previous year. Chart 14 shows the usual peaks for these fires tend to occur in March, April and May, and in 2019-20 these 3 months accounted for 71% 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.

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

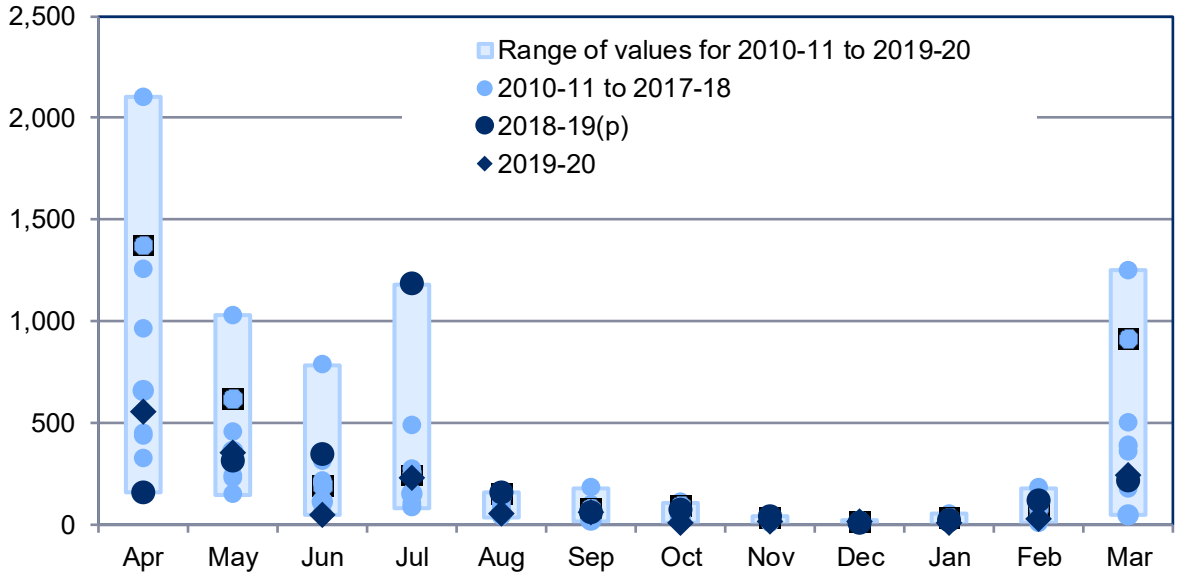
	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Derelict building	56	95	100	71	97
Derelict road vehicle	26	66	43	36	22
Outdoor	5,675	4,379	5,031	6,155	4,673
Grassland, woodland and crops	2,518	1,270	1,588	2,686	1,605
Outdoor structures	653	650	654	574	575
Outdoor equipment and machinery	8	9	10	4	5
Other outdoors (including land) (b)	2,496	2,450	2,779	2,891	2,488
All deliberate secondary fires	**5,757**	**4,540**	**5,174**	**6,262**	**4,792**

(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.

Chart 14 shows that both April 2019 and March 2020 saw relatively few fires in this category compared with earlier years. However April 2019 saw more than double the number of deliberate secondary grassland fires compared with April 2018 and accounted for 35% of these fires in 2019-20. May 2019 and March 2020 also saw increases compared with the previous year of 13% and 12% respectively. As previously stated, weather is likely to be an influencing factor in the number of outdoor fires and in 2019-20, levels of rainfall for these 3 months were down compared with the previous year, whilst hours of sunshine increased in both April 2019 and March 2020.

Seven months saw annual decreases in the number of deliberate secondary grassland, woodland and crop fires compared with 2018-19; June down 86%, July down 81%, August down 66%, October down 88%, November down 68%, January down 60% and February down 79%.

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



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

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 17 fatal casualties during 2019-20 (see table 8). This is 3 fewer than in the previous year and similar to the number to those seen prior to that. The overall trend since 2001-02 has been downward, however numbers are small and prone to fluctuation (see chart 15). In 2019-20 North Wales had the highest fatality rate but fell to its third lowest rate. The rate in Mid and West Wales fell compared with 2018-19 to its lowest rate since 2012-13, whilst the rate in South Wales rose to its highest rate since 2015-16.

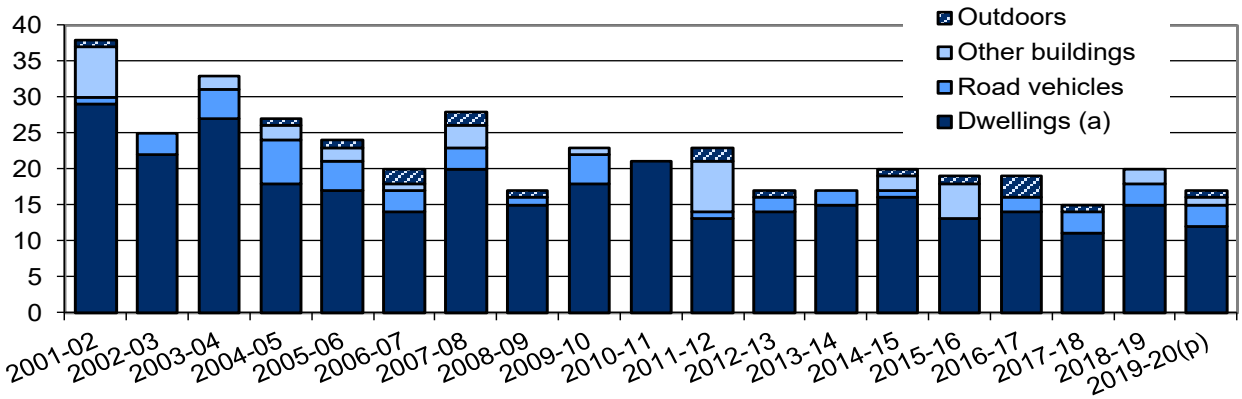
Table 8: Number and rate of fatal casualties from fires by Fire and Rescue Authority

	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)**
2010-11	10	14.6	7	7.9	4	2.7	**21**	**6.9**
2011-12	8	11.6	8	9.0	7	4.7	**23**	**7.5**
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(r)	8	11.5	7	7.7	5	3.3	**20**	**6.4**
2019-20(p)	5	7.1	3	3.3	9	5.8	**17**	**5.4**

(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.
(p) Provisional data.

In the 19 years since 2001-02, 77% of fatal casualties occurred in dwelling fires, equating to a total of 324 out of 423 fatalities. In 2019-20 71% of fatalities were the result of dwelling fires; there were 3 fewer dwelling fatalities than in the previous year.

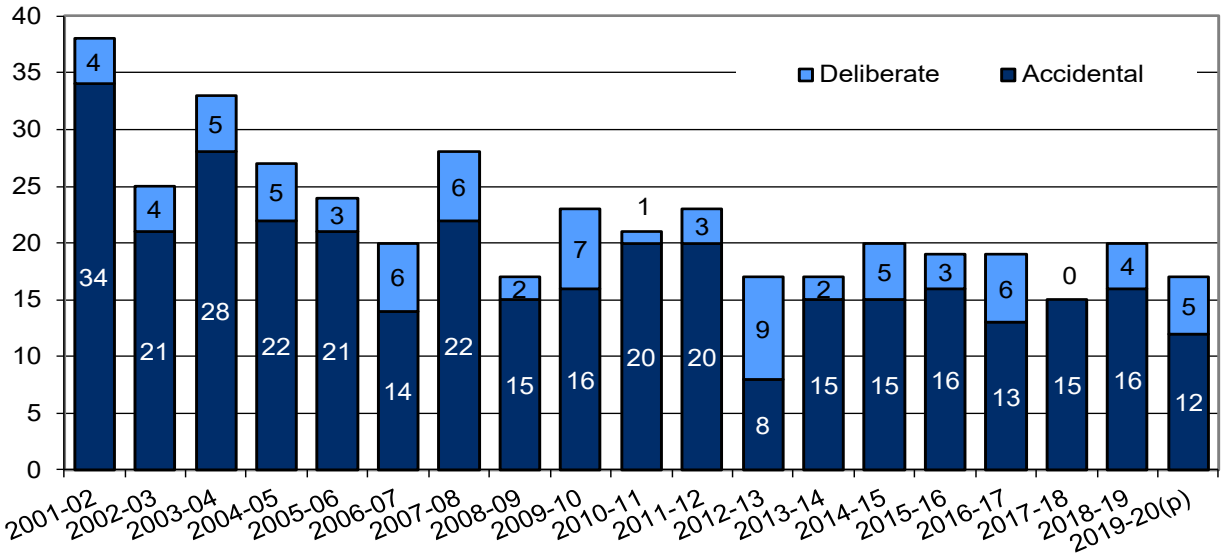
Chart 15: Number of fatal casualties from fires by location



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

12 of the fatalities in 2019-20 were the result of accidental fires, 11 of which occurred in dwellings.

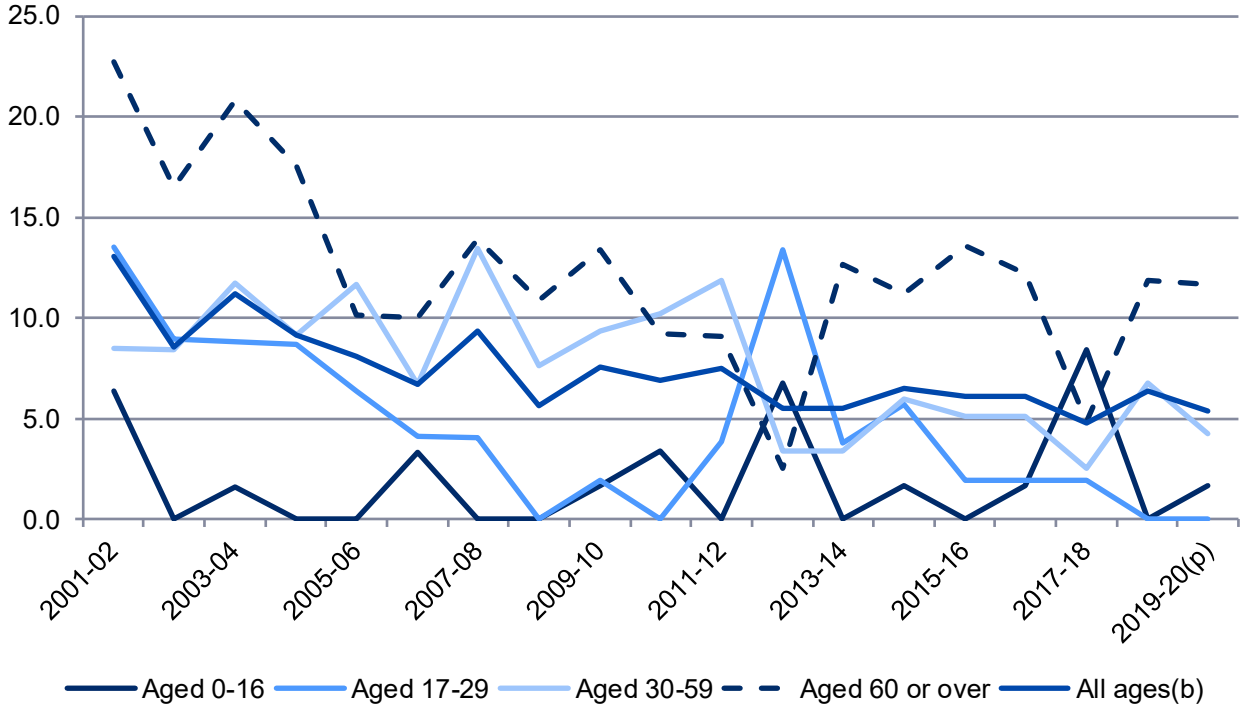
Chart 16: Number of fatal casualties from fires by motive



(p) Provisional data.

In 2019-20 10 of the 17 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 this is once again seen in 2019-20 although the rate fell slightly from 11.9 to 11.7. The rate for those aged 30-59 also fell, from 6.8 to 4.8.

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

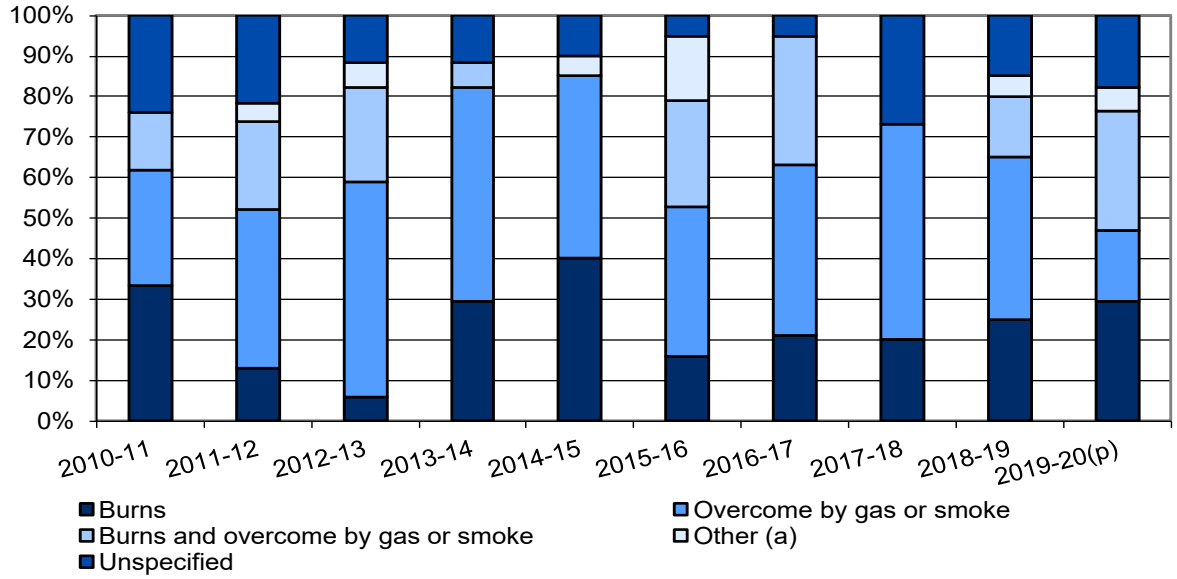


(a) Population data are taken from ONS Mid-Year Estimates revised periodically and so rates are subject to change between publications. Rates are calculated per age group.
(b) Includes fatalities of unknown age.
(p) Provisional data.

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 (3 fatalities in 2019-20), burns (5 fatalities in 2019-20), and a combination of the two (5 fatalities in 2019-20). In addition to these causes, in 2019-20 there were a further 3 fatalities who did not have their cause of death recorded by time of publication and 1 fatality where the cause was recorded as 'other'.

Since 2001-02 'being overcome by smoke or gas' has accounted for 45% of fatalities, 'burns' accounted for 22% of fatalities and a combination of the two caused 19% of fatalities.

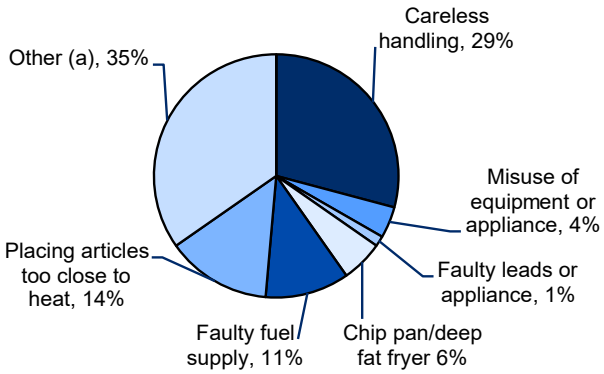
Chart 18: Percentage of fatal casualties by cause of death



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

Of the 343 fatalities occurring in accidental fires from 2001-02 to 2019-20, 36% 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 29%, 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 (2015-16 to 2019-20)



(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 2019-20 there were 507 non-fatal casualties, the second lowest number (and rate) in the time series. The overall trend over the last ten years has been downward, although in recent years the numbers and associated rates have fluctuated. Only Mid and West Wales saw a reduction in the number (and rate) of non-fatal casualties, to their lowest number in the time series. North Wales and South Wales both saw increases, with over 100 more non-fatal casualties in South Wales. North Wales had the highest rate of the three Welsh FRAs.

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

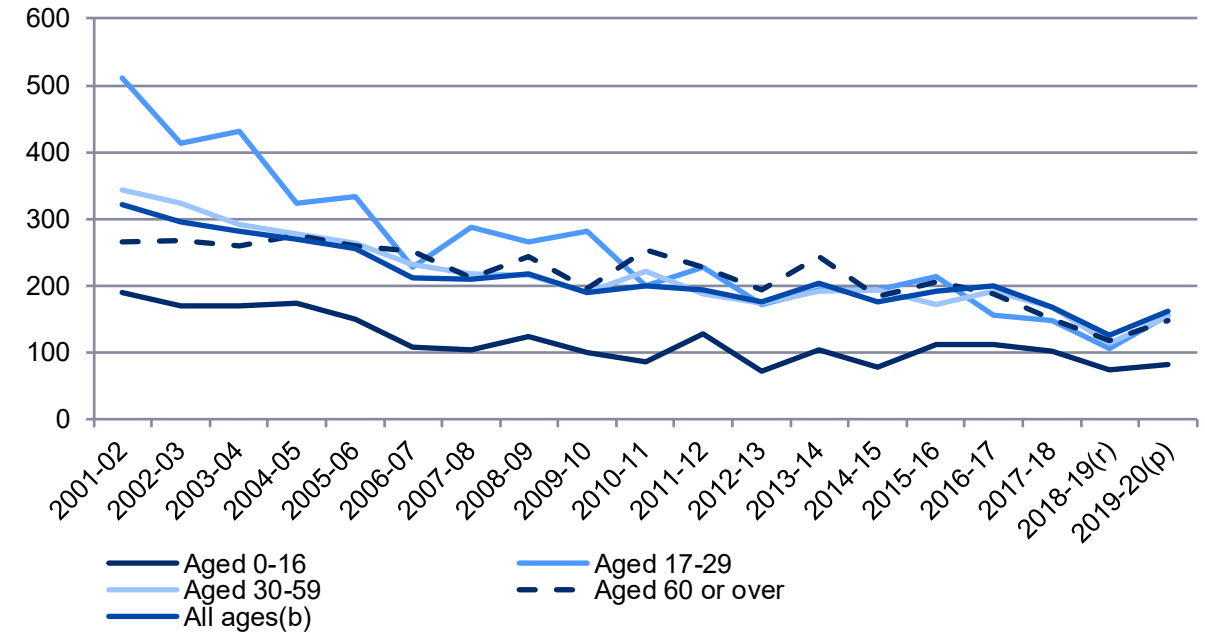
	North Wales		Mid and West Wales		South Wales		**Wales**	
	Number(a)	pmp(b)	Number(a)	pmp(b)	Number(a)	pmp(b)	**Number(a)**	**pmp(b)**
2010-11	281	409.7	132	148.3	194	131.6	**607**	**199.0**
2011-12	228	331.2	184	205.9	180	121.5	**592**	**193.2**
2012-13	213	308.7	151	168.5	177	118.9	**541**	**176.0**
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	224.5	144	159.6	226	149.1	**526**	**169.0**
2018-19(r)	117	167.5	118	130.0	161	105.0	**396**	**126.2**
2019-20(p)	139	198.7	103	113.2	265	171.7	**507**	**160.8**

(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.
(p) Provisional data.

The number of non-fatal casualties recorded in 2019-20 rose 28% compared with the previous year. This increase was driven by a rise in the numbers of those receiving first aid or advised to have a precautionary check, up 45% compared with 2018-19. Over the same time period numbers of those sent to hospital rose by 8%. In 2019-20, 61% of non-fatal casualties received first aid or were advised to have a precautionary check-up. 30% of non-fatal casualties were taken to hospital with slight injuries and the remaining 9% were taken to hospital with severe injuries.

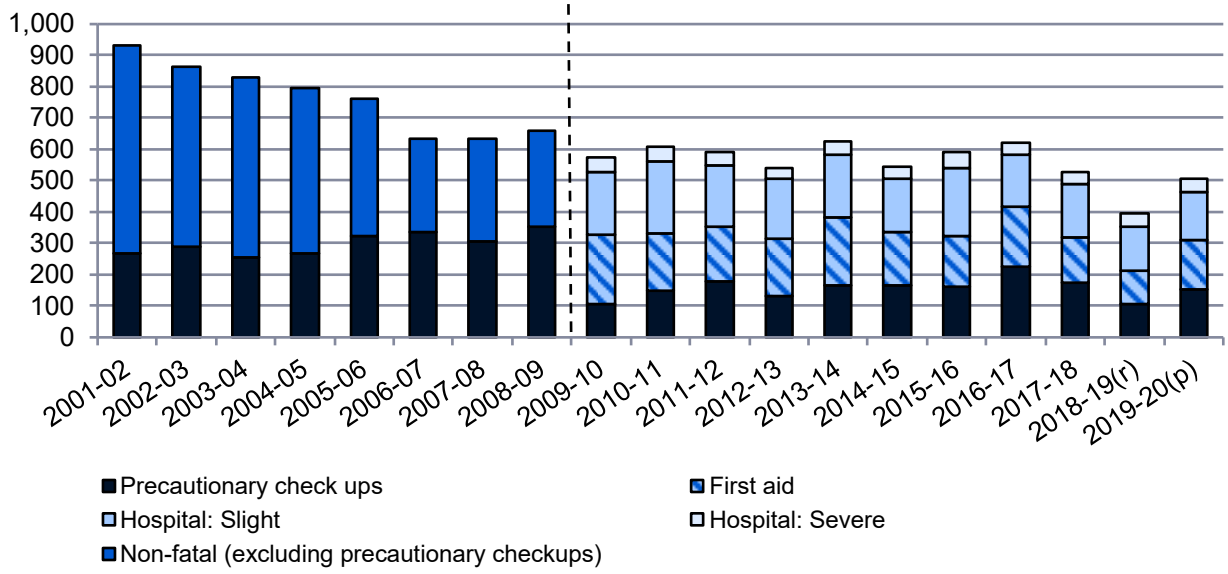
Those aged 16 and under have consistently had the lowest non-fatal casualty rate per million population, with 82 in 2019-20. At the beginning of the time series the highest rate of casualties per million population occurred in the 17-29 age group, but over recent years the rate has dropped to be more in line with the other age groups shown. All age groups saw increased rates in 2019-20, with those aged 17-29 seeing the largest rate increase.

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.
(b) Includes casualties of unknown age.
(r) Revised data.
(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.
(r) Revised data.
(p) Provisional data.

Of the 507 non-fatal casualties in 2019-20, 378 (75%) were the result of in dwelling fires, 53 (10%) in other buildings, 43 (8%) from road vehicle fires and 33 (7%) in outdoor fires.

Most non-fatal casualties (86%) were from accidental fires and 66% were the result of accidental dwelling fires.

Cooking (excluding chip pans) was responsible for 82 non-fatal casualties in accidental fires in 2019-20; as in other years this was the largest single cause of non-fatal casualties in accidental fires in 2019-20 (19%). Chip pan related casualties accounted for a further 11% of those in accidental fires.

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

In 2019-20, 199 non-fatal casualties were sent to hospital, an increase of 8% compared with the previous year. Of these 199 non-fatal casualties, 86% were from accidental fires and almost 6 in 10 occurred in accidental fires in dwellings.

153 (77%) 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 72 non-fatal casualties and 36% 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 58 casualties in 2019-20 with burns, accounting for 29% of those sent to hospital.

Rescues from fires

In 2019-20, 217 people were rescued from fires, 84 (39%) of whom were not injured, 6 were fatalities (rescued but later died from fire-related injuries) and 127 were non-fatal casualties. In total this is an 18% increase in the number of rescues compared with the previous year, but a similar figure to that in 2017-18.

In 2019-20, the majority (80%) of rescues (including those injured) from fires were from dwelling fires, a further 12% were rescued from other buildings, 6% from road vehicles and 2% from outdoor locations.

Table 10: Number of casualties and rescues by location

	Dwelling	Other building	Road vehicle	Outdoors	**All**
2017-18					
Fatalities	11	0	3	1	**15**
of which were rescued	*4*	*0*	*2*	*0*	***6***
Non-fatal casualties (a)	407	65	32	22	**526**
of which were rescued	*92*	*10*	*4*	*2*	***108***
Rescued (non-injured)	90	8	3	0	**101**
Total rescued	186	18	9	2	**215**
2018-19(r)					
Fatalities	15	2	3	0	**20**
of which were rescued	9	0	0	0	**9**
Non-fatal casualties (a)	299	50	33	14	**396**
of which were rescued	*88*	*4*	*6*	*1*	***99***
Rescued (non-injured)	59	15	0	2	**76**
Total rescued	156	19	6	3	**184**
2019-20(p)					
Fatalities	12	1	3	1	**17**
of which were rescued	6	0	0	0	**6**
Non-fatal casualties (a)	378	53	43	33	**507**
of which were rescued	*100*	*15*	*7*	*5*	***127***
Rescued (non-injured)	67	11	6	0	**84**
Total rescued	173	26	13	5	**217**

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

In 2019-20, 56% of those rescued were male, compared with 44% recorded as female. Almost two fifths of those rescued were aged between 30 and 59, and over a quarter were aged 60 or over.

Equal numbers of males and females were rescued from fires but not injured. People aged 30-59 accounted for 35% of those who were rescued but not injured.

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

	Male	Female	0-16	17-29	30-59	60 or over	**All (a)**
2017-18							
Fatalities	11	4	5	1	3	4	**15**
of which were rescued	*4*	*2*	*0*	*1*	*3*	*2*	***6***
Non-fatal casualties (b)	282	239	60	77	197	124	**526**
of which were rescued	*58*	*50*	*8*	*10*	*41*	*35*	***108***
Rescued (not injured)	63	38	10	11	27	34	**101**
Total rescued	125	90	18	22	71	71	**215**
2018-19(r)							
Fatalities	13	7	0	0	8	10	**20**
of which were rescued	6	3	0	0	4	4	**9**
Non-fatal casualties (b)	212	178	44	55	135	99	**396**
of which were rescued	46	51	12	14	35	24	**99**
Rescued (not injured)	39	36	6	11	23	14	**76**
Total rescued	91	90	18	25	62	42	**184**
2019-20(p)							
Fatalities	11	6	1	0	5	10	**17**
of which were rescued	1	5	0	0	1	5	**6**
Non-fatal casualties (b)	284	222	49	80	182	126	**507**
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**

(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

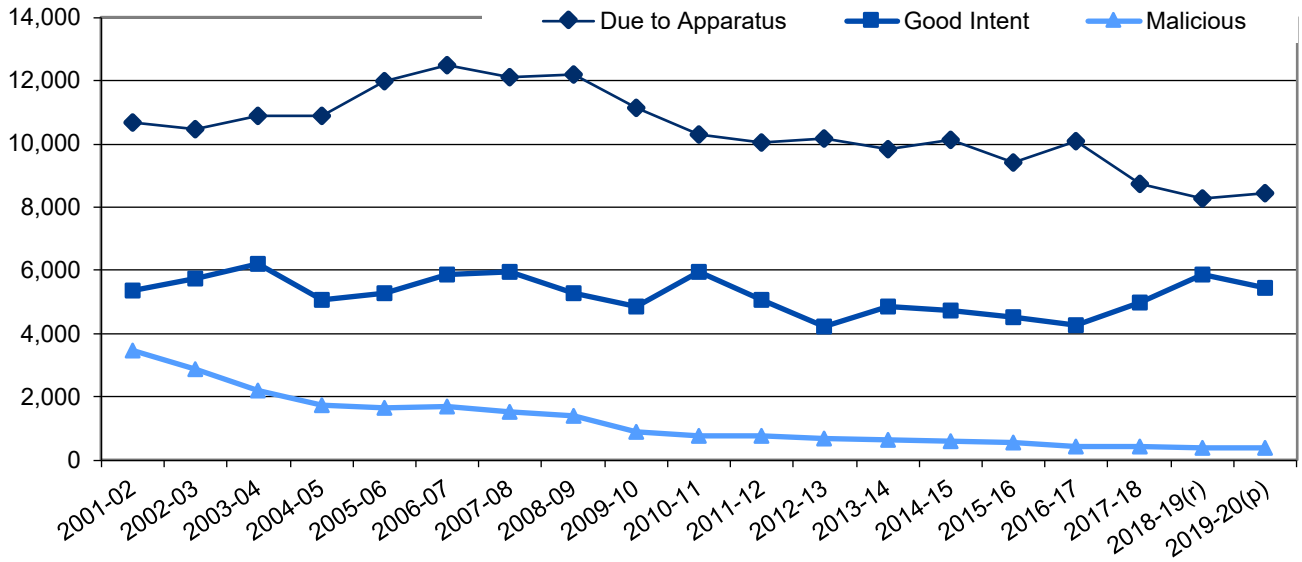
Good intent - in which the call was made in good faith in the belief that there was a fire to attend

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

In 2019-20 there were 14,257 fire false alarms in Wales, down from 14,485 in 2018-19, a decrease of 2%. This is the second lowest number in the time series. Since 2001-02 the number of fire false alarms attended has fallen by 27%. FRAs suggest successful call challenging is a factor in this long-term fall (information taken from internal call logging systems).

Good intent fire false alarms saw a decrease in 2019-20 compared with the previous year (7%). Fire false alarms due to apparatus rose by 2% whilst malicious fire false alarms saw no percentage change.

Chart 22: Number of fire false alarms by reason



(p) Provisional data.

Overall there has been a downward trend in the number of malicious fire false alarms, falling by 89% since 2001-02. Between 2011-12 and 2018-19 numbers fell each year; in 2019-20 there was 1 more malicious fire false alarm than in 2018-19. Only Mid and West Wales saw a rise in the number of malicious fire false alarms compared with 2018-19 (up 9%). In South Wales there was a fall of 3% whilst North Wales saw no percentage change.

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2010-11	114	172	483	**769**
2011-12	129	168	478	**775**
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(r)	41	101	230	**372**
2019-20(p)	41	110	222	**373**
Percentage change 2018-19 to 2019-20	0	9	-3	0

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

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

	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Dwellings (a)	**5,331**	**5,605**	**5,623**	**5,799**	**6,123**
Fire alarm due to apparatus	3,661	3,955	3,445	3,322	3,629
Good intent false alarm	1,456	1,466	1,991	2,315	2,327
Malicious	214	184	187	162	167
Other buildings	**6,375**	**6,705**	**6,008**	**5,602**	**5,474**
Fire alarm due to apparatus	5,744	6,109	5,299	4,932	4,820
Good intent false alarm	386	412	542	526	511
Malicious	245	184	167	144	143
Road vehicles	**391**	**408**	**367**	**351**	**297**
Fire alarm due to apparatus	1	0	0	2	1
Good intent false alarm	380	400	358	344	290
Malicious	10	8	9	5	6
Outdoors	**2,396**	**2,072**	**2,163**	**2,733**	**2,363**
Fire alarm due to apparatus	4	2	1	2	1
Good intent false alarm	2,303	2,005	2,106	2,670	2,305
Malicious	89	65	56	61	57

(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 fell by 2% and accounted for 38% of fire false alarms in 2019-20, the majority of which (88%) were due to apparatus. A breakdown of more detailed reasons is given in table 14. In dwellings, 59% of fire false alarms were due to apparatus and 38% were raised with good intent. Most (98%) 'other outdoors' fire false alarms were due to good intent, and these were mainly (66%) as a result of controlled burning.

In April 2015 North Wales FRA introduced a new strategy which meant they didn't automatically attend Automatic Fire Alarm Systems (AFA) [15] 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 FRA in 2015-16 (when compared to the previous year). Following this, numbers of these false alarms started to rise again, however there have now been three consecutive decreases to the

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

lowest in the time series. Mid and West Wales also saw a decrease (7%) compared with 2018-19, whilst South Wales saw no percentage change.

In 2019-20, 38% of fire false alarms due to apparatus (in buildings) were the result of human causes, with cooking causing over 1,400 of these fire false alarms (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 (48% and 30% respectively).

Of those fire false alarms in buildings which were due to apparatus, 36% were the result of problems with safety systems (faulty, damaged, poorly maintained and poorly sited). A further 16% 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 a fifth of fire false alarms due to apparatus, but a tenth of those in dwellings.

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

	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Dwellings (a)					
Contaminants	411	399	364	321	364
External factors	45	42	38	34	34
Human	1,665	1,748	1,563	1,533	1,760
Accidentally/ carelessly set off	*166*	*159*	*168*	.	*186*
Cooking/burnt toast	*1,267*	*1,304*	*1,102*	*1,064*	*1,232*
Smoking	*112*	*146*	*184*	*139*	*212*
Testing	*95*	*92*	*86*	*97*	*76*
Other	*25*	*47*	*23*	*54*	*54*
System: smoke alarm	1,059	1,229	961	940	902
System: heat	40	41	38	37	38
System: sprinkler	5	9	8	12	5
System: flame	34	22	25	31	29
System: other	230	273	287	284	310
Animal (b)	5	6	1	5	5
Unknown	167	186	160	125	182
All	**3,661**	**3,955**	**3,445**	**3,322**	**3,629**
Other Buildings					
Contaminants	1,224	1,363	1,136	1,056	960
External factors	110	117	92	103	95
Human	1,869	1,845	1,493	1,631	1,429
Accidentally/ carelessly set off	*639*	*632*	*497*	*535*	*480*
Cooking/burnt toast	*739*	*711*	*575*	*561*	*484*
Smoking	*116*	*138*	*103*	*129*	*121*
Testing	*338*	*314*	*304*	*372*	*304*
Other	*37*	*50*	*14*	*34*	*40*
System: smoke alarm	1,388	1,574	1,300	1,026	1,130
System: heat	103	95	73	60	57
System: sprinkler	36	48	38	60	54
System: flame	32	26	39	31	37
System: other	507	481	563	500	454
Animal (b)	21	28	15	23	20
Unknown	454	532	550	442	584
All	**5,744**	**6,109**	**5,299**	**4,932**	**4,820**

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

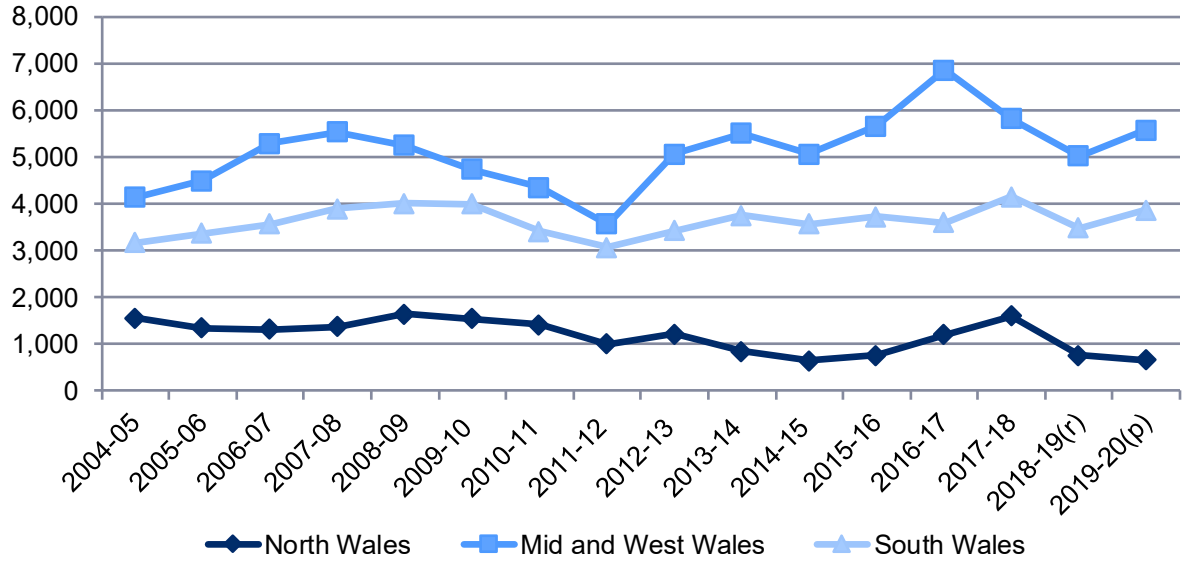
(b) Includes heat, sprinkler, flame and other unspecified systems.

(p) Provisional data.

Special service incidents

In 2019-20, 29% 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. Overall attendance at SSIs increased by 10% in 2019-20; both Mid and West Wales and South Wales saw an increase of 12% whilst North Wales saw a decrease of 14%. The drop in attendances in North Wales is due to a fall in the number of incidents assisting other agencies and RTCs.

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

Attendances at medical incidents and RTCs each accounted for 22% of SSIs. Numbers of RTCs fell by 4% whilst numbers of medical incidents rose by 17% (mainly due to increased numbers in Mid and West Wales).

Flooding incidents increased by 73% and made up 10% of SSI incidents in 2019-20. Incidents involving rescue from water more than doubled compared with the previous year. In 2019-20 37% of flooding incidents and 32% of rescue from water incidents occurred in February 2020, the wettest February on record (since 1862).

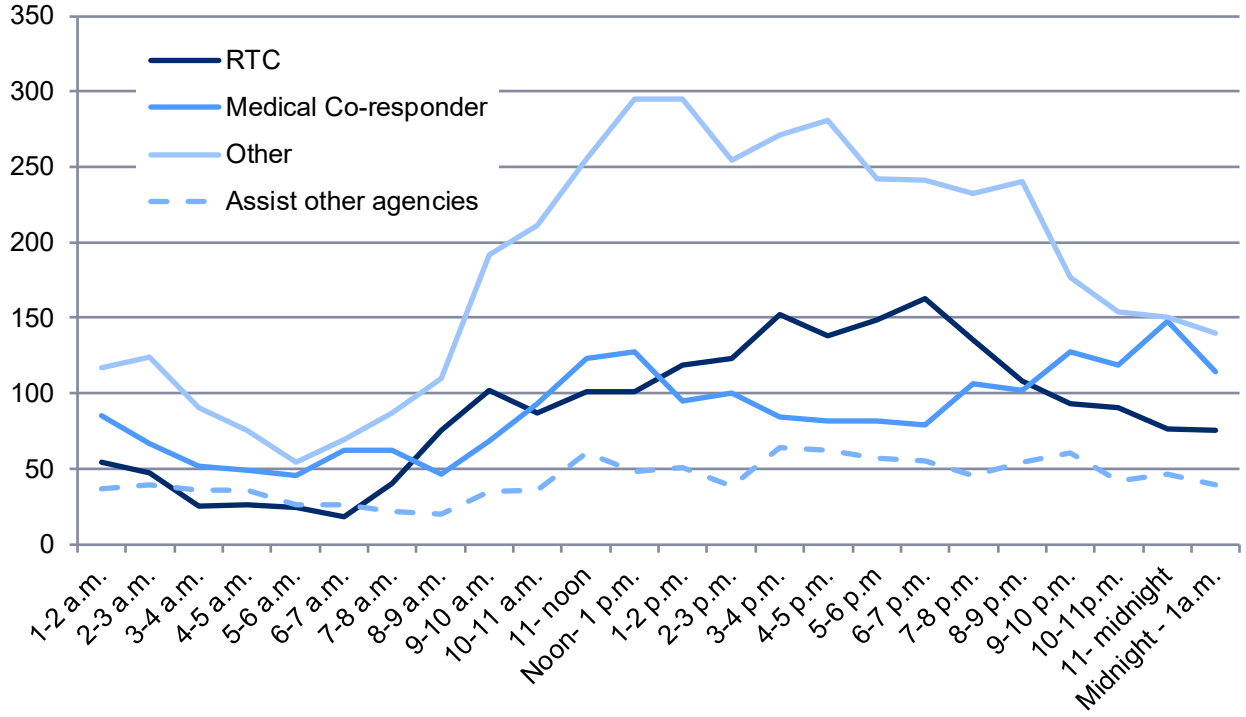
Table 15: Number of SSIs by type

	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Road traffic collision	2,611	2,394	2,331	2,202	2,121
Flooding	650	546	586	571	989
Rescue or evacuation from water	141	123	117	97	214
Other rescue/release of people	296	281	376	327	322
Animal assistance incidents	314	328	317	305	326
Making Safe	332	233	265	283	346
Lift release	372	399	401	360	359
Effecting entry	540	581	671	563	572
Medical incident - Co-responder/First responder	2,724	4,174	3,023	1,809	2,117
Assist other agencies	468	988	1,672	1,098	1,034
Other(a)	1,280	1,202	1,250	1,148	1,234
All Special Service Incidents	**9,728**	**11,249**	**11,009**	**8,763**	**9,634**
All Special Service False Alarms	427	575	515	515	473

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

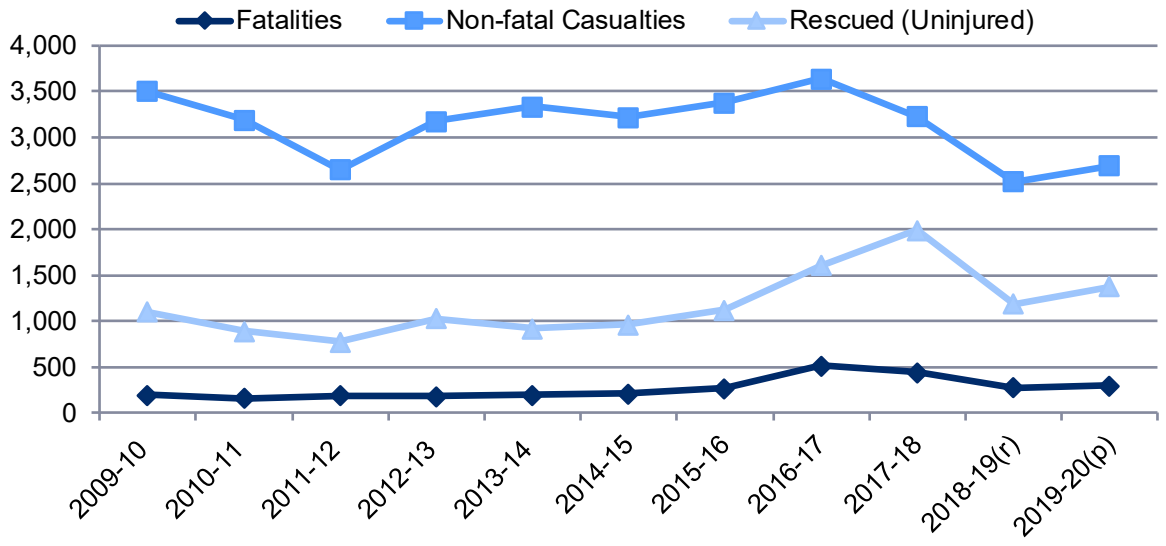
The chart below shows the majority of SSIs are attended in the day, between 9a.m. and 9p.m., with almost 7 in 10 occurring in these 12 hours. Numbers of RTCs show rising numbers from 6a.m. with peaks around 9a.m., 3p.m. and 6p.m. perhaps to be expected coinciding with rush hours.

Chart 24: Number of RTCs, Medical responder incidents and others attended by time of day, 2019-20



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 2019-20 there were 301 fatalities from SSIs, a 9% increase, the third highest number in the time series (from 2009-10). Over half the number of SSI fatalities occurred in medical incidents, whilst RTCs account for 14% of fatalities. There were 2,689 non-fatal casualties from SSIs in 2019-20, a rise of 7% compared with 2018-19 but the third lowest number in the time series. RTCs accounted for 46% of non-fatal casualties, whilst medical incidents accounted for 31%.

Chart 25: Number of SSI related fatalities, non-fatal casualties and rescues



(r) Revised data
(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)
2010-11	160	39	3,190	1,003	888
2011-12	192	36	2,646	885	773
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(r)	277	28	2,518	909	1,189
2019-20(p)	301	38	2,689	894	1,374

(r) Revised data
(p) Provisional data.

In 2019-20 32% of non-fatal casualties in SSIs were rescued. Of those who were rescued (but uninjured), 16% were released from lifts, 12% occurred in RTCs and 12% related to rescues from 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:

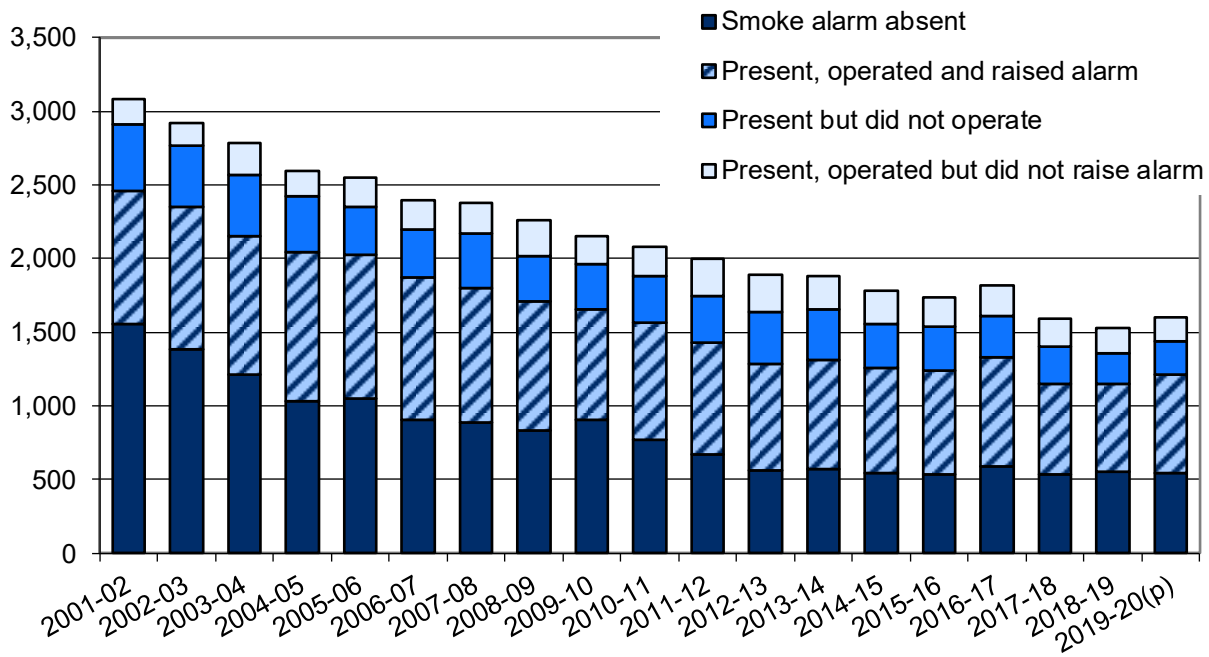
1. Present, operated and raised the alarm

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 26: 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 just over a half of the fires in dwellings occurring in 2019-20 (similar to previous years). In a further 14% of cases a smoke alarm was present but failed to operate, whilst in a third of dwelling fires a smoke alarm was absent. In 1% 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 almost two thirds. In only 13% of dwelling fires in North Wales a smoke alarm was absent; respective percentages are higher for Mid and West Wales and South Wales (39% and 41% respectively).

Table 17 shows that the number of dwellings fires where a smoke alarm was absent decreased by 2% to 544 in 2019-20 compared with 554 in 2018-19.

In 2019-20, only Mid and West Wales saw a decrease (19%) in the number of dwelling fires where smoke alarms were absent (compared with the previous year). Both North Wales and South Wales saw increases, of 2% and 12% 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**
2010-11	76	278	412	**766**
2011-12	73	234	361	**668**
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(r)	47	236	271	**554**
2019-20(p)	48	192	304	**544**
Percentage change 2018-19 to 2019-20	2	-19	12	-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[16]).

Since 2009-10, 39 of the 142 accidental dwelling fire fatalities occurred in fires where a smoke alarm was known to be absent. 42 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.

[16] 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

	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Dwellings (a)					
Alarm was raised before system operated	132	129	109	109	114
No person in earshot	27	36	34	26	16
Occupants did not respond	31	31	26	24	32
No other person responded	1	4	6	2	1
Other	9	8	12	7	7
Unknown	2	3	4	1	1
All dwellings	**202**	**211**	**191**	**169**	**171**
Other buildings					
Alarm was raised before system operated	50	40	46	27	42
No person in earshot	5	7	10	10	5
Occupants did not respond	0	1	2	1	0
No other person responded	0	0	1	0	0
Other	6	1	0	1	0
Unknown	2	3	1	1	1
All other buildings	**63**	**52**	**60**	**40**	**48**

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

In 2019-20 there were 156 smoke alarms which activated but did not raise the alarm due to the alarm having already been raised. This equates to 71% 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 in spite of being activated (for the available time series which dates from 2009-10).

In 2019-20, of the smoke alarms which did not raise the alarm 15% were due to occupants not responding, and a further 10% cent were due to no one being in earshot.

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 2019-20 the main reason for smoke alarm failures, in both dwellings and other buildings, was that the fire was not close enough to the detector (53% of the smoke alarms which failed to activate in building fires). Defective or missing batteries accounted for 8% of alarm failures in dwelling fires in 2019-20; there were no alarm failures due to defective or missing batteries in other buildings.

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

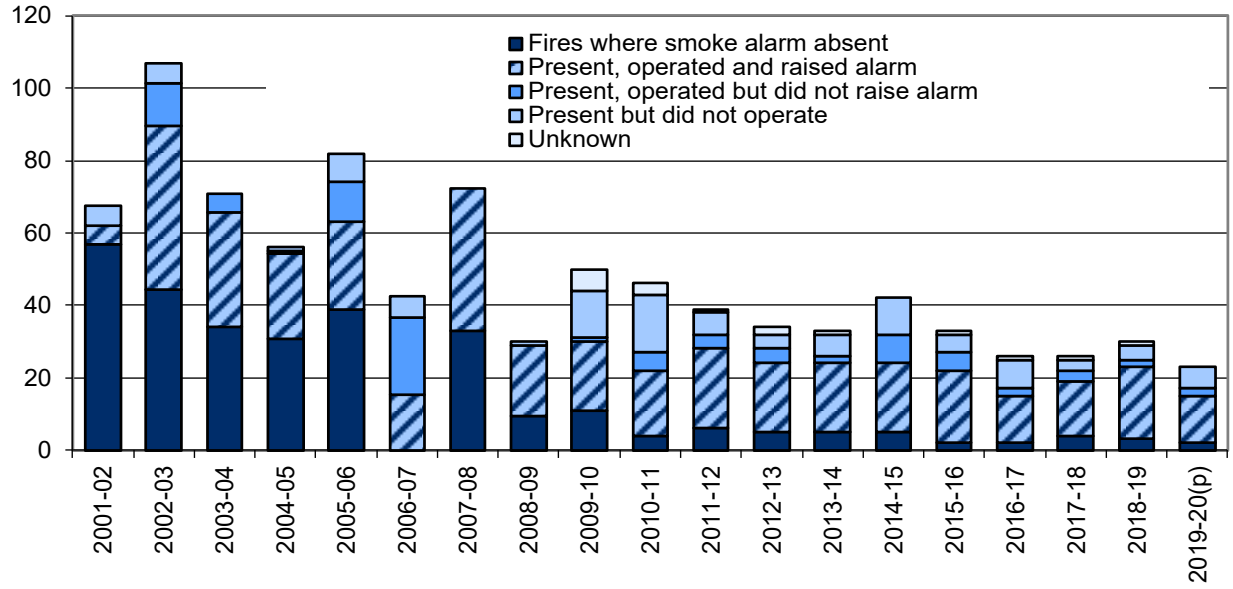
	2015-16	2016-17	2017-18	2018-19(r)	2019-20(p)
Dwellings (a)					
Fire not close enough to detector	165	149	138	126	121
Fire in area not covered by system	30	35	21	18	31
Alarm battery missing/defective	40	36	21	19	19
Fault in system	11	8	7	8	7
Detector removed	10	5	5	4	5
Alerted by other means	12	15	22	15	10
Other (b)	28	28	24	20	22
Unknown	5	11	13	7	10
All	**301**	**287**	**251**	**217**	**225**
Other buildings					
Fire not close enough to detector	46	47	46	33	43
Fire in area not covered by system	19	14	19	17	9
Alarm battery missing/defective	3	1	1	0	0
Fault in system	4	2	4	4	4
Detector removed	0	0	1	3	4
Alerted by other means	17	13	14	7	5
Other (b)	17	17	11	15	13
Unknown	14	11	5	3	7
All	**120**	**105**	**101**	**82**	**85**

(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 23 fires occurring in schools in 2019-20 a smoke alarm was present and operated correctly in 65% of incidents, whilst in a further 26% of cases a smoke alarm was present but failed to operate. There were 2 school fires where it was recorded a smoke alarm was not present.

Chart 27: Number of fires in schools by presence and operation of smoke detectors

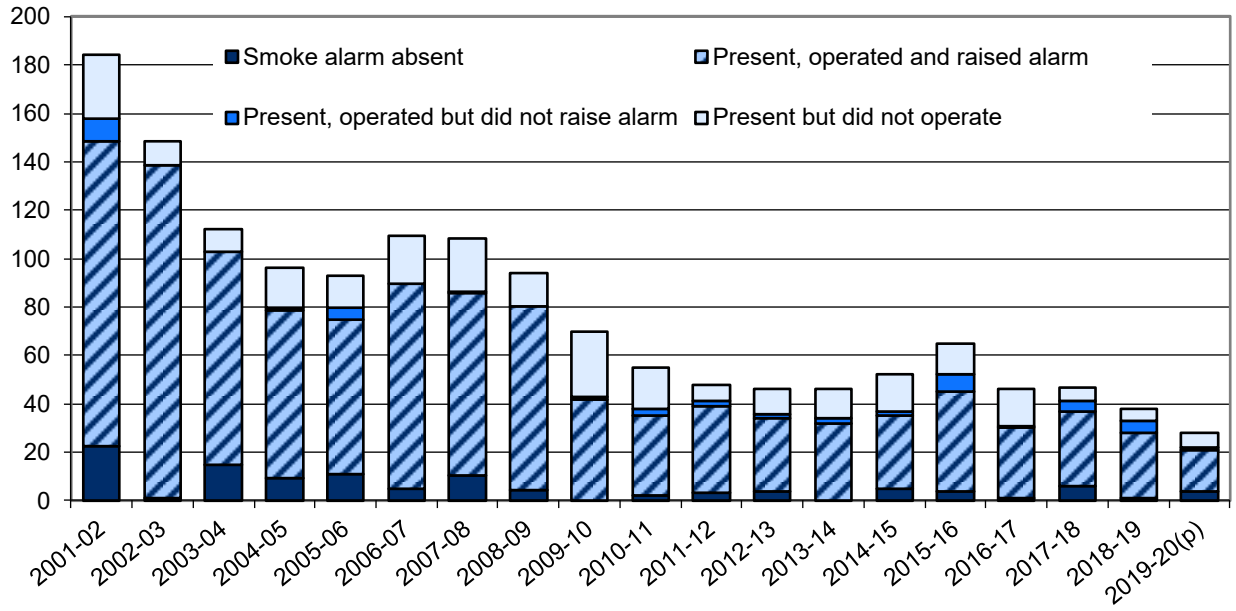


(p) (p) Provisional data.

Smoke alarms in fires at hospitals and medical care facilities

In 2019-20 there were 28 fires in hospitals and medical facilities[17], 12 fewer than in the previous year and a fall of 85% compared with the number in 2001-02. A smoke alarm was present and operated correctly in 64% of fires in hospitals in 2019-20. In 21% of hospital fires a smoke alarm was present but failed to operate. At 4 fires it was recorded a smoke alarm was absent.

Chart 28: 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.

11 of the 28 hospital fires occurring in 2019-20 were accidental.

Since 2009-10 there have been no fatalities and 11 non-fatal casualties in hospital fires.

Further data is available on this topic on StatsWales.

[17] 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.

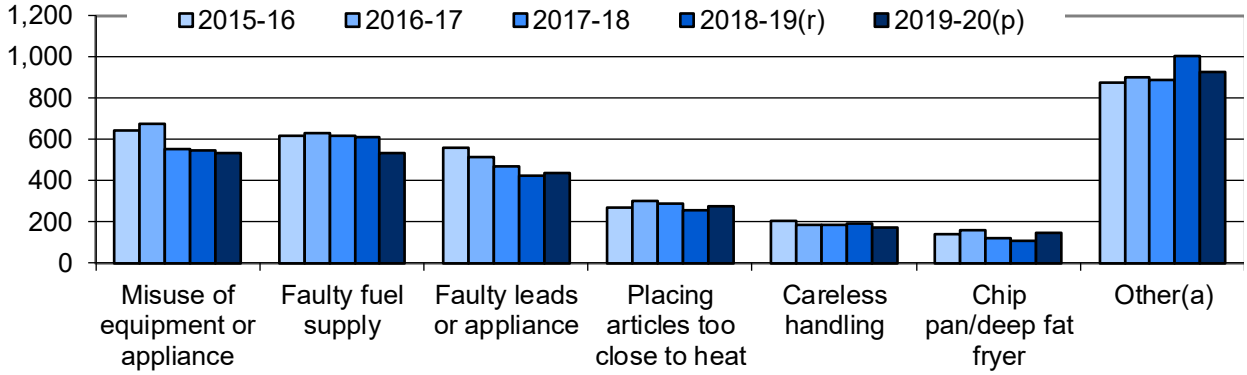
The **source of ignition** is the source of the flame, spark or heat that started the fire.

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 2019-20, followed by faulty fuel supply, each accounting for 18%. Throughout the time series these 2 categories have been the main cause of accidental fires. Faulty leads or appliances were responsible for 14% and 'other accidental' accounted for 31% of accidental fires.

Chart 29: 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'.
(r) Revised data.
(p) Provisional data

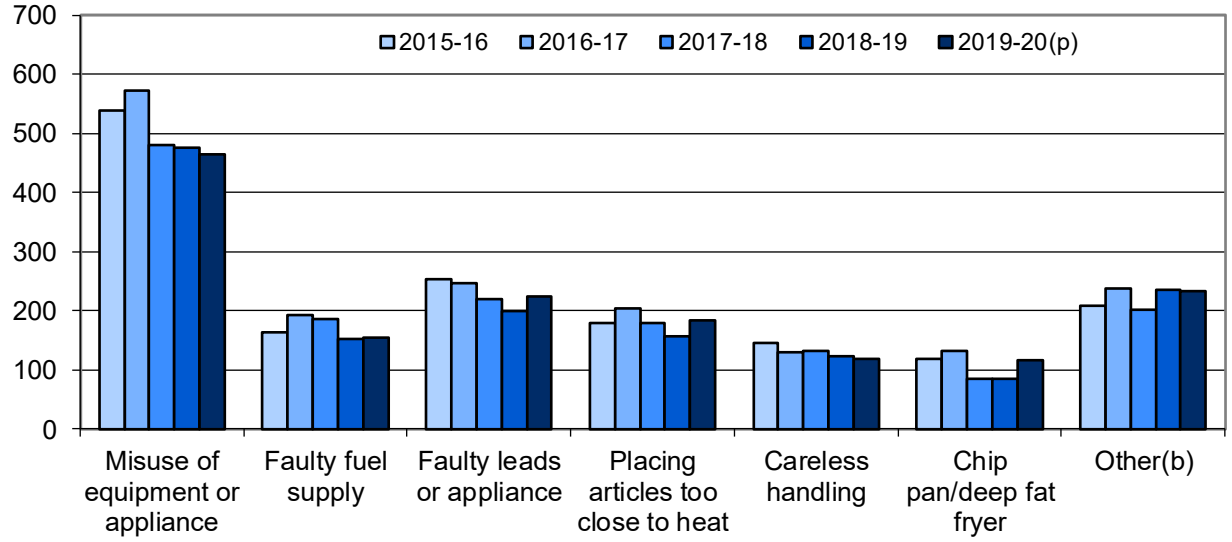
Table 20: Number of accidental primary fires by cause

	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
2010-11	801	726	565	324	273	177	1,051	**3,930**
2011-12	828	629	551	300	201	169	942	**3,636**
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(r)	544	609	420	256	188	109	1,007	**3,133**
2019-20(p)	535	531	435	273	173	144	925	**3,016**

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

The misuse of equipment or appliances was the main cause of accidental fires in dwellings, with 466 cases recorded in 2019-20. This equates to almost a third of accidental dwelling fires in 2019-20 and a small drop of 2% compared with 2018-19. Several causes saw increases in 2019-20; accidental dwelling fires caused by chip pans and deep fat fryers rose by 38%, those caused by placing articles too close to heat rose by 17% and those related to faulty leads or appliances rose by 13%.

Chart 30: 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

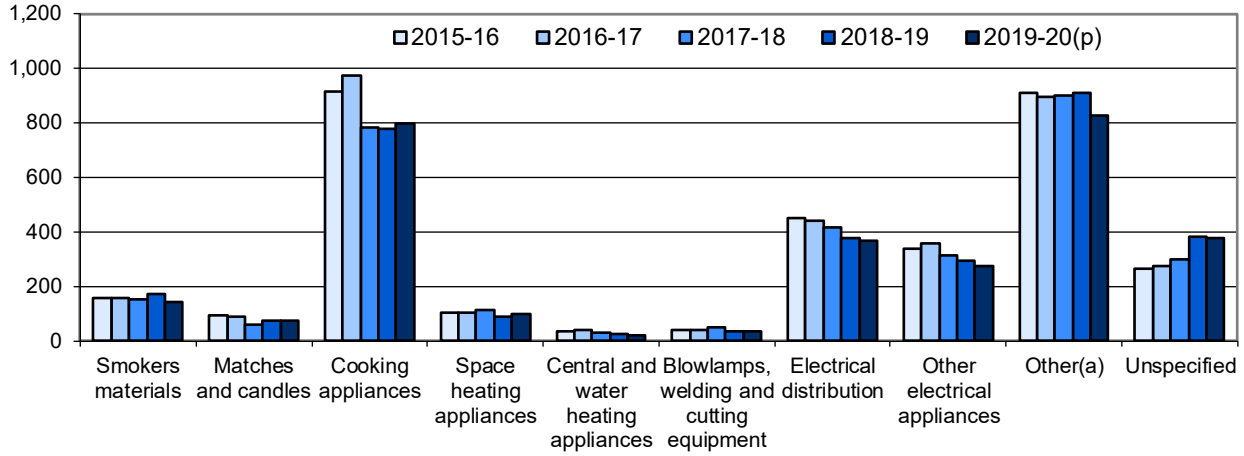
	Misuse of equipment or appliance	Faulty fuel supply	Faulty leads or appliance	Placing articles too close to heat	Careless handling	Chip pan /deep fat fryer	Other(b)	Total
2010-11	653	188	227	185	177	156	239	**1,826**
2011-12	704	159	227	190	139	147	220	**1,789**
2012-13	623	170	285	181	133	140	193	**1,725**
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(p)	466	154	224	184	119	117	233	**1,497**

(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 2019-20 there were 799 cases (26% of accidental fires), 3% more than in the previous year. Most categories saw decreases, the exceptions being cooking appliances and space heating appliances (up 9%). Some smaller categories included in 'other' also saw increases.

Chart 31: 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.
(r) Revised data.
(p) Provisional data.

In 2019-20 there were 37 non-fatal casualties in accidental fires in dwellings which were attributable to smokers' materials, 16 more than the number in the previous year. There were 4 fatalities due to smoking materials, 3 fewer than in the previous year. Since 2009-10, 37% of fatalities in accidental fires in dwellings were caused by smokers' materials. The National Survey for Wales[18] found that in 2019-20 18% of adults smoked but there has been a general downward trend.

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
2010-11	242	121	1,096	146	38	55	462	466	1,068	**3,930**
2011-12	157	102	1,129	114	24	39	461	366	1,022	**3,636**
2012-13	134	71	1,009	120	32	49	493	369	861	**3,340**
2013-14	164	87	1,012	114	28	44	483	354	926	**3,445**
2014-15	163	80	969	117	38	50	437	361	884	**3,347**
2015-16	158	91	917	104	35	40	448	339	912	**3,308**
2016-17	155	86	972	105	40	39	439	358	895	**3,363**
2017-18	152	57	783	113	32	48	416	315	902	**3,117**
2018-19(r)	173	75	776	88	23	34	376	296	912	**3,133**
2019-20(p)	144	75	799	96	22	33	365	275	828	**3,016**

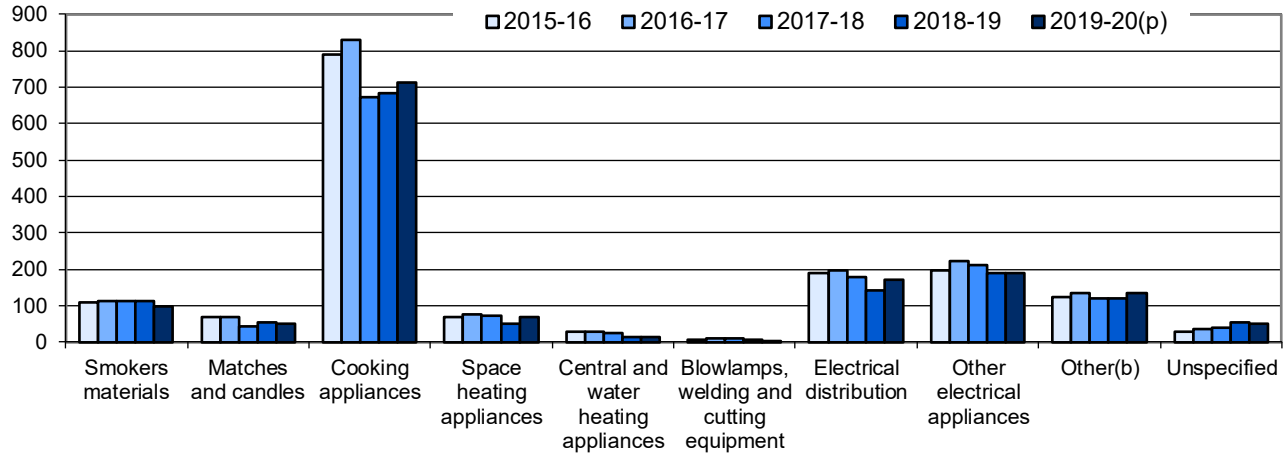
(a) See footnote (a) of chart 31.
(r) Revised data.
(p) Provisional data.

[18] National Survey for Wales: Adult lifestyles by age and gender

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 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.

Cooking appliances were the main source of ignition in accidental dwelling fires accounting for 48% of accidental dwelling fires in 2019-20. The number of these fires has fallen by 52% since 2001-02 but rose by 4% compared with the previous year. Fires ignited by cooking appliances have also been responsible for 53% of non-fatal casualties in accidental dwelling fires since 2009-10. Over the same period ‘Other electrical appliances’ accounted for 11% of non-fatal casualties in accidental dwelling fires.

Chart 32: 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
2010-11	147	64	928	89	23	5	154	278	115	**1,826**
2011-12	103	63	975	81	18	8	181	204	127	**1,789**
2012-13	100	53	872	88	27	11	194	230	118	**1,725**
2013-14	117	63	892	80	22	14	195	207	117	**1,732**
2014-15	116	55	840	73	24	5	182	197	110	**1,635**
2015-16	109	69	789	68	28	5	191	196	124	**1,609**
2016-17	114	69	830	77	29	11	196	222	136	**1,719**
2017-18	113	44	673	72	24	9	180	212	119	**1,485**
2018-19(r)	113	53	685	52	14	8	143	189	119	**1,430**
2019-20(p)	97	52	713	68	14	4	171	191	136	**1,497**

(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 2019-20 around 15% of accidental fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. Chip pans were responsible for 18% of accidental fires where cooking appliances ignited.

Table 24: Number of accidental primary fires by cause and source of ignition 2019-20(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	5	1	2	13	102	0	21	**144**
Matches and candles	5	0	0	31	11	0	28	**75**
Cooking appliances	465	12	35	105	16	141	25	**799**
Space heating appliances	9	8	13	38	8	0	20	**96**
Central and water heating appliances	2	5	9	3	0	0	3	**22**
Blowlamps, welding and cutting	8	1	2	12	1	0	9	**33**
Electrical distribution	7	227	80	4	0	1	46	**365**
Other electrical appliances	12	40	160	10	1	0	52	**275**
Other	21	215	110	51	29	1	401	**828**
Unspecified	1	22	24	6	5	1	320	**379**
Total	**535**	**531**	**435**	**273**	**173**	**144**	**925**	**3,016**

(p) Provisional data.

In 2019-20, around 3 in 10 accidental dwelling fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. In the same year, of the 191 accidental fires in dwellings where the source was recorded as ‘other electrical appliance’, 127 (two thirds) were due to faulty leads.

Table 25: Number of accidental dwelling(a) fires by cause and source of ignition 2019-20(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	1	8	71	0	13	**97**
Matches and candles	4	0	0	23	9	0	16	**52**
Cooking appliances	429	10	30	92	13	116	23	**713**
Space heating appliances	6	4	8	28	7	0	15	**68**
Central and water heating appliances	1	5	4	3	0	0	1	**14**
Blowlamps, welding and cutting	2	0	0	1	1	0	0	**4**
Electrical distribution	4	103	44	0	0	1	19	**171**
Other electrical appliances	8	19	127	8	1	0	28	**191**
Other	7	9	9	20	16	0	75	**136**
Unspecified	1	4	1	1	1	0	43	**51**
Total	**466**	**154**	**224**	**184**	**119**	**117**	**233**	**1,497**

(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.

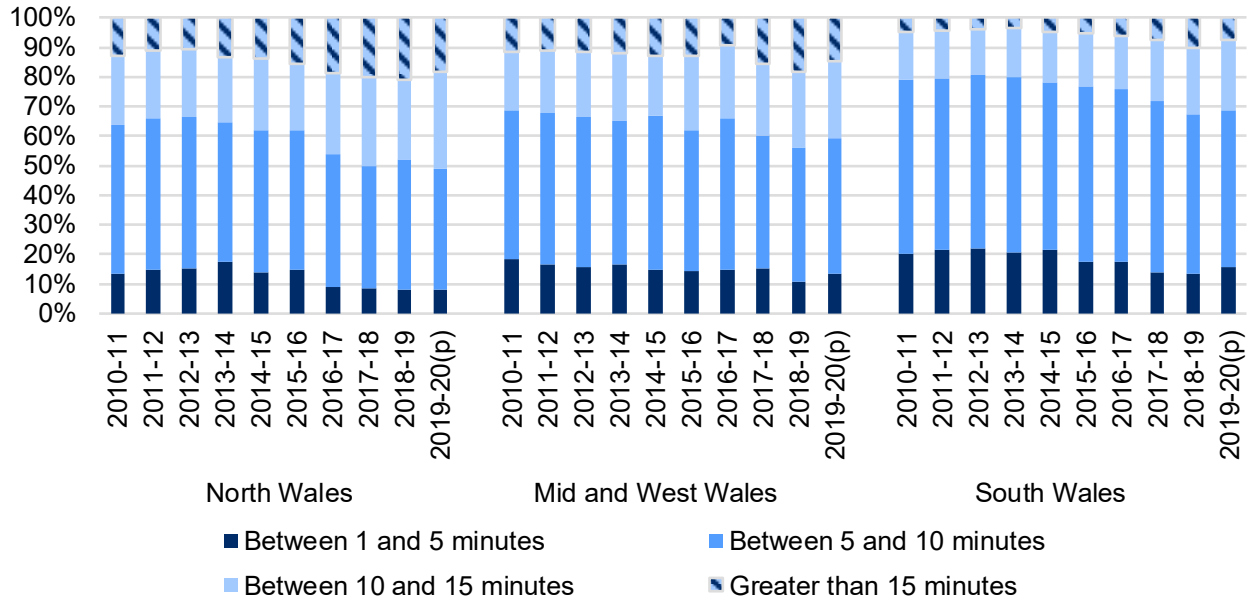
In 2019-20, 49% of primary fires attended in North Wales had a response time of between 1 and 10 minutes. The corresponding percentages in Mid and West Wales and South Wales were 59% and 69% respectively.

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
2017-18				
North Wales	8	41	30	20
Mid and West Wales	15	45	24	16
South Wales	14	58	21	7
Wales	**13**	**50**	**24**	**13**
2018-19(r)				
North Wales	8	44	27	21
Mid and West Wales	11	45	26	19
South Wales	13	54	22	10
Wales	**11**	**49**	**24**	**15**
2019-20(p)				
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**

(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.
(p) Provisional data.

Chart 33: Percentage of primary fires attended within specified time brackets



(p) Provisional data.

In 2019-20, 64% of primary dwelling fires attended in North Wales had a response time of between 1 and 10 minutes; in Mid and West Wales 65% were attended in this time, whilst in South Wales the respective proportion was 77%.

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)				
2017-18				
North Wales	9	55	21	15
Mid and West Wales	19	47	23	10
South Wales	16	63	18	4
Wales	**16**	**55**	**20**	**9**
2018-19				
North Wales	9	54	19	18
Mid and West Wales	15	51	23	11
South Wales	18	59	20	2
Wales	**15**	**55**	**21**	**9**
2019-20(p)				
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**

(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 2019-20 the total number of fires attended fell by 16% in England, 9% in Scotland and 18% in Wales (compared with 2018-19). This decrease was driven by a fall in secondary fires, down 23% in England, 10% in Scotland and 27% in Wales. Numbers of primary fires also fell, in England and Scotland by 6% and in Wales by 3%.

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
2010-11	228.4	92.2	128.5	38.9	13.1	24.2	20.7	6.4	13.5
2011-12	223.9	87.0	131.1	32.3	12.4	18.7	16.5	5.7	10.2
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	155.0	71.1	78.7	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	82.8	27.3	10.9	15.7	10.8	4.8	5.6
2017-18(r)	167.3	74.3	89.0	26.2	10.7	14.7	11.0	4.3	6.3
2018-19(p)(r)	182.9	73.3	106.3	26.8	10.5	15.7	12.9	4.4	8.2
2019-20(p)	154.0	68.7	82.2	24.5	9.8	14.1	10.6	4.3	6.0

(a) English data are taken from Fire statistics data tables
(b) Scottish data for 2017-18 are provisional. 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 fell in both England and Scotland to its lowest rates in the time series. The rate in Wales also fell, but to its second lowest rate in the series. This is the first year where Scotland has had a lower fatality rate than Wales.

The non-fatal casualty rates in both England and Scotland fell compared with 2018-19, also to their lowest rates. The rate in Wales rose, but follows a very low rate in 2018-19. Scotland continues to have the highest rate for non-fatal casualties.

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)
2010-11	335	6.4	9,397	179	52	9.9	1,332	253	21	6.9	607	199
2011-12	315	5.9	9,375	177	59	11.1	1,414	267	23	7.5	592	193
2012-13	286	5.3	8,429	158	46	8.7	1,319	248	17	5.5	541	176
2013-14	278	5.2	7,819	145	31	5.8	1,310	246	17	5.5	626	203
2014-15	264	4.9	7,596	140	40	7.5	1,101	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	265	4.8	7,097	128	44	8.1	1,266	234	19	6.1	621	199
2017-18	340	6.1	7,301	131	44	8.1	1,117	206	15	4.8	526	169
2018-19(r)	253	4.5	7,163	128	45	8.3	1,197	220	20	6.4	396	126
2019-20(p)	243	4.3	6,910	123	27	4.9	1,024	187	17	5.4	507	161

(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’.

Quality information

The analysis in this bulletin relates to fire and rescue service incidents between April 2019 and end March 2020 and therefore covers a period largely prior to the Coronavirus (Covid-19) pandemic, and the lockdown measures introduced on 23 March 2020.

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 over 910,000. 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 over 1,700 staff including over 1,400 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. 2019-20 data are currently marked as provisional and may be revised in future publications.

The table below compares the provisional 2018-19 data which was published in August 2019 with the revised data detailed in this bulletin.

Comparison of provisional data with revised data (2018-19)

	Provisional 2018-19 (published Aug 2019)	Revised 2018-19 (published Nov 2020)	Percentage change
All Fires and fire false alarms	**27,399**	**27,396**	**0.0**
All fires	12,912	12,911	0.0
Primary Fires	4,392	4,392	0.0
Secondary	8,185	8,184	0.0
Fire false Alarms	14,487	14,485	0.0
Fatalities	20	20	0.0
Non Fatal Casualties	396	396	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 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.

- 2019-20 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 outputs Grassland fires 2019-20 and Deliberate fires 2019-20.

Next update

Data for selected StatsWales tables for the period April to September 2020 will be published in February 2021.

Fire and Rescue Incident Statistics 2020-21 due to be published in August 2021

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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