ystadegau ar gyfer cymru statistics for wales

Statistical Bulletin

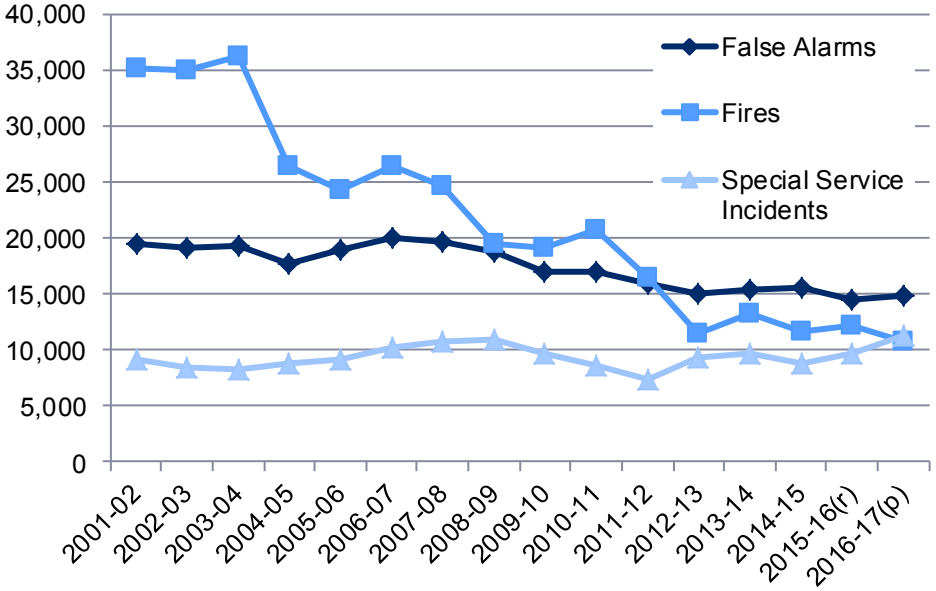
Llywodraeth Cymru Welsh Government

Fire and rescue incident statistics 2016-17

31 Aug 2017
SB 45/2017

Analysis includes details on location, cause, motive, casualties, false alarms and Special Service (non-fire) Incidents (SSIs) attended in financial years 2001-02 to 2016-17, where the 2016-17 data are currently provisional.

Chart 1 Number of fire and 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 69 per cent, and by 56 percent over the last 10 years. The number of false alarms has also fallen but not to such an extent, only decreasing by almost a quarter since 2001-02. Numbers of SSIs have fluctuated throughout the time series, but have actually risen by 23 per cent since 2001-02 (chart 1)
- Compared with 2015-16, numbers of fires fell by 11 per cent in 2016-17
- There were 19 fatal casualties from fires in Wales in 2016-17 (table 8)
- There were 621 non-fatal casualties in 2016-17, an increase of 5 per cent compared with 2015-16 (table 9). The increase is due to a rise of 29 per cent in those people receiving first aid or sent for precautionary checks.
- There were 1,716 grassland, woodland and crop fires in 2016-17, a decrease of 47 per cent compared with 2015-16.

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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New analysis included in this bulletin relates to SSIs, Local Authorities and casualty rates by age group.

Fires, 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.

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

The Welsh FRAs attended 36,790 fires, false alarms and SSIs in 2016-17, an increase of 1 per cent compared with 2015-16. Of all attendances, 4,756 were primary fires (13 per cent), 5,578 secondary fires (15 per cent) and 417 chimney fires (1 per cent). There were also 14,791 false alarm incidents (40 per cent of attendances) and 11,248 SSIs (31 per cent).

Since 2001-02 all types of attendances except SSIs have fallen, numbers of primary fires falling by 63 per cent, secondary fires by 74 per cent, chimney fires by 53 per cent and false alarms by 24 per cent. Numbers of SSIs have varied since 2001-02 (and increased overall by 23 per cent) and in recent years greater collaboration with the other emergency services (for instance with ambulance services in attending medical incidents) may be responsible for increases.

Whilst there is an overall downward trend in the numbers of false alarms and secondary fires, they have been erratic and prone to fluctuation. Analysis on pages 14 to 20 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, false alarm and special service attendances (a)

	False alarms	Primary fires	Secondary fires	Chimney fires	Special Sevice Incidents (b)	**All attendances(c)**
2007-08	19,598	7,689	16,352	620	10,827	**55,086**
2008-09	18,855	6,985	11,724	812	10,917	**49,293**
2009-10	16,901	6,800	11,562	790	9,693	**45,746**
2010-11	17,006	6,414	13,503	771	8,699	**46,393**
2011-12	15,874	5,687	10,162	615	7,406	**39,744**
2012-13	15,088	4,745	5,922	771	9,406	**35,932**
2013-14	15,312	4,790	7,801	578	9,761	**38,242**
2014-15	15,485	4,561	6,541	549	8,889	**36,025**
2015-16(r)	14,493	4,678	6,998	432	9,730	**36,331**
2016-17(p)	14,791	4,756	5,578	417	11,248	**36,790**
Percentage change 2015-16 to 2016-17	2	2	-20	-3	16	**1**

(a) Data for false alarms and fires from 2001-02 onwards are available on StatsWales.
(b) Data from 2004-05 to 2008-09 are taken from the annual Operational data collection, 2009-10 data onwards are taken from IRS.
(c) 'All attendances' shown here does not match figures quoted in previous bulletins as this figure includes SSIs for the first time.
(r) Revised data.
(p) Provisional data.
.. Data not available
- negligible (less than half the final digit shown)

In both North Wales and South Wales the largest category of incident type were false alarms, accounting for more than two fifths of incidents in each FRA. However in Mid and West Wales SSIs made up the largest category.

Incidents attended in 2016-17, by Fire and Rescue Authority(p):

Chart 2a: North Wales

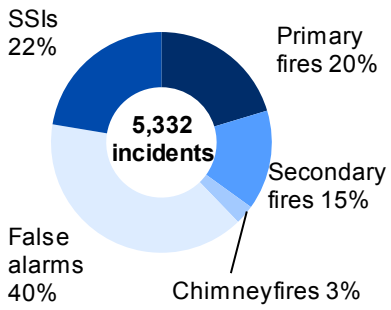


Chart 2b: Mid and West Wales

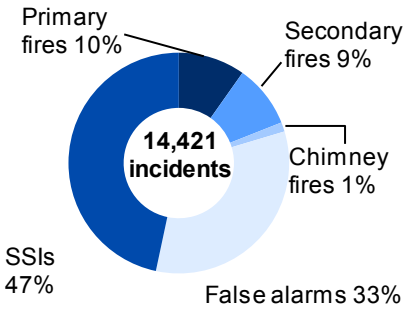
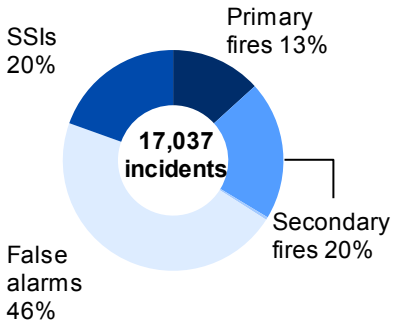


Chart 2c: South Wales (a)



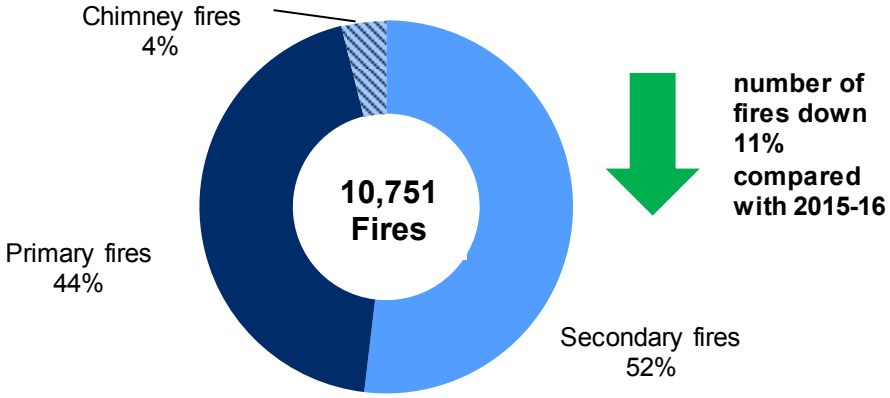
(a) The 69 Chimney fires in South Wales equated to less than 0.5 % of incidents in 2016-17.
(p) Provisional data.

Fires

In 2016-17 there were 10,751 fires attended in Wales, a decrease of 11 per cent compared with 2015-16. Since 2001-02 the number of fires has fallen by 69 per cent.

In 2016-17 secondary fires accounted for 52 per cent of all fires, primary fires accounted for 44 per cent and chimney fires 4 per cent. Prior to 2012-13 secondary fires had accounted for at least 6 in 10 fires each year, but this proportion has fallen in recent years, driven by the greater reduction in secondary fires compared with primary fires.

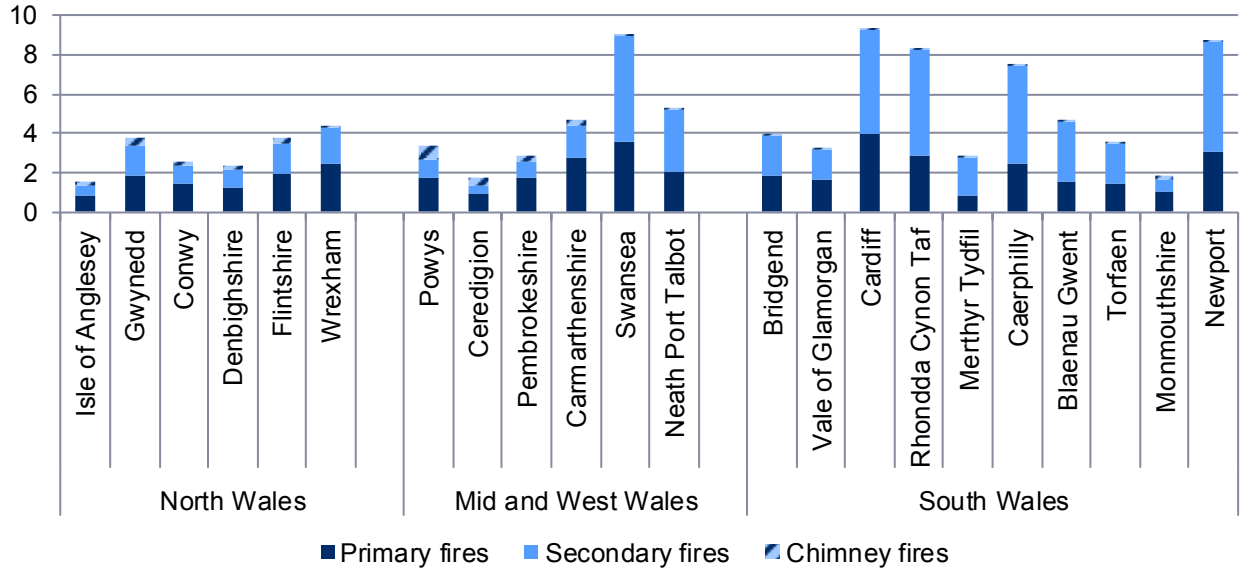
Chart 3: Fires by fire type as a percentage of all fires, 2016-17(p)



(p) Provisional data.

In 2016-17, Cardiff, Swansea and Newport each accounted for 9 per cent of fires in Wales, whilst Rhondda Cynon Taf and Caerphilly each saw 8 per cent. The lowest numbers were in Isle of Anglesey (2 per cent), Ceredigion (2 per cent), Monmouthshire (2 per cent) and Denbighshire (2 per cent).

Chart 4: Numbers of fires by Local Authority and type of fire, 2016-17 (p)



(p) Provisional data

Further data on this topic is available on StatsWales

Fires by type

Primary fires

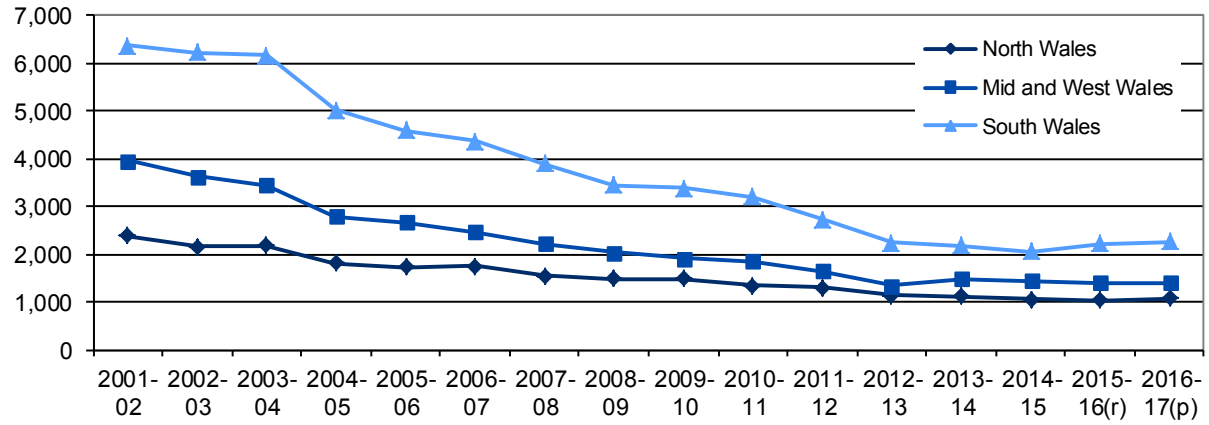
In 2016-17 provisional figures show the number of primary fires increased by 2 per cent compared with the previous year, to 4,756. North Wales and South Wales FRAs saw increases in the number of primary fires (3 per cent and 2 per cent respectively), whilst Mid West Wales FRA saw no percentage change.

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2007-08	1,555	2,233	3,901	**7,689**
2008-09	1,495	2,042	3,448	**6,985**
2009-10	1,490	1,914	3,396	**6,800**
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(r)	1,049	1,409	2,220	**4,678**
2016-17(p)	1,085	1,411	2,260	**4,756**
Percentage change 2015-16 to 2016-17	3	0	2	**2**

(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



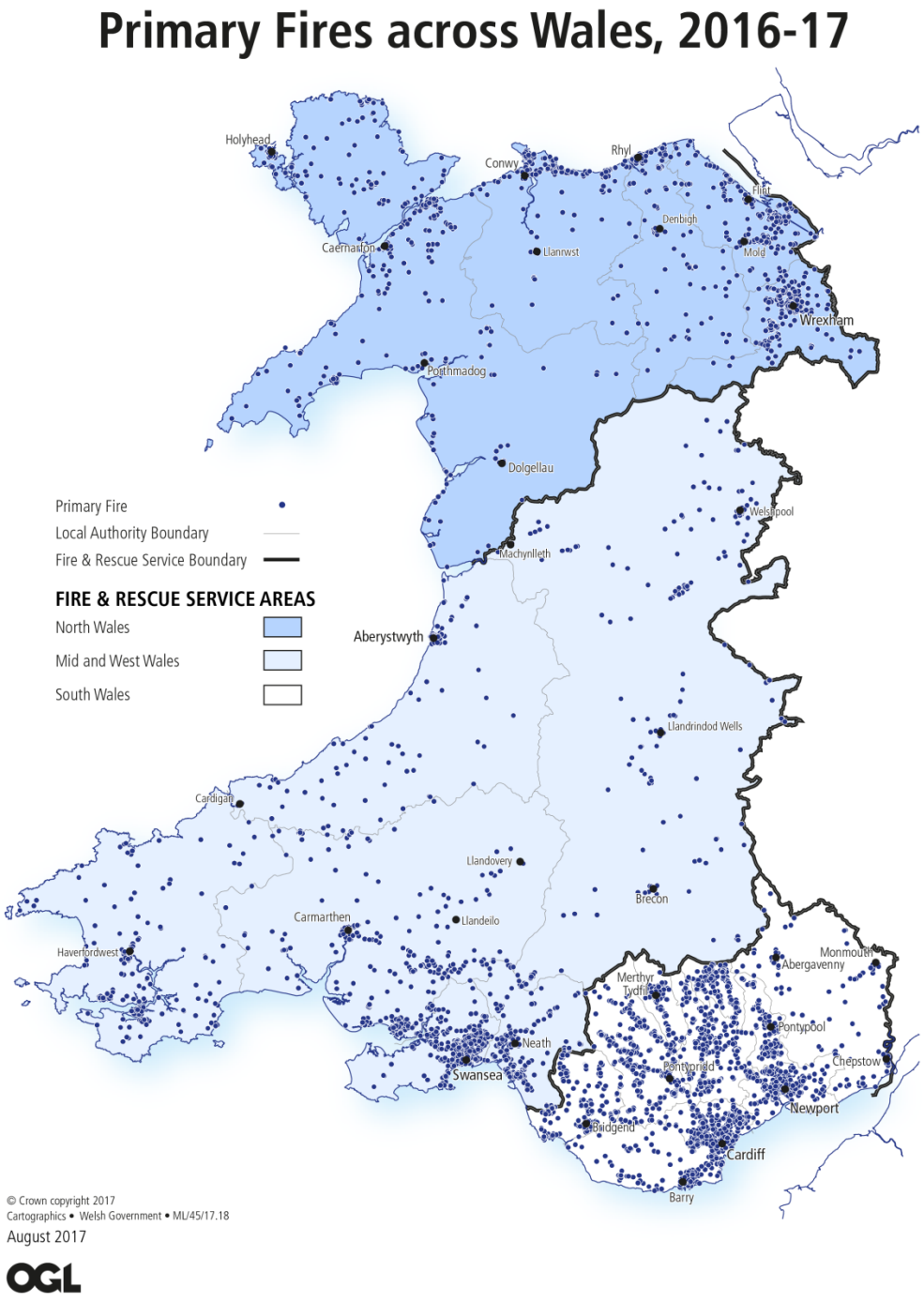
(r) Revised data.
(p) Provisional data.

Since 2001-02 both Mid and West Wales and South Wales have seen falls of almost two-thirds in the number of primary fires. In North Wales the number has fallen by 54 per cent. The FRAs in Wales have a number of ongoing fire safety campaigns[1] and community fire safety work (such as

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

home safety checks and school visits[2]) and these may be a contributory factor in the 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.



[2] Home Fire Safety Check StatsWales tables

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
2007-08	2,380	31	1,568	20	3,193	42	548	7
2008-09	2,257	32	1,375	20	2,851	41	502	7
2009-10	2,202	32	1,477	22	2,663	39	458	7
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(r)	1,775	38	963	21	1,573	34	367	8
2016-17(p)	1,858	39	930	20	1,669	35	299	6
Percentage change 2015-16 to 2016-17	5	.	-3	.	6	.	-19	.

(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

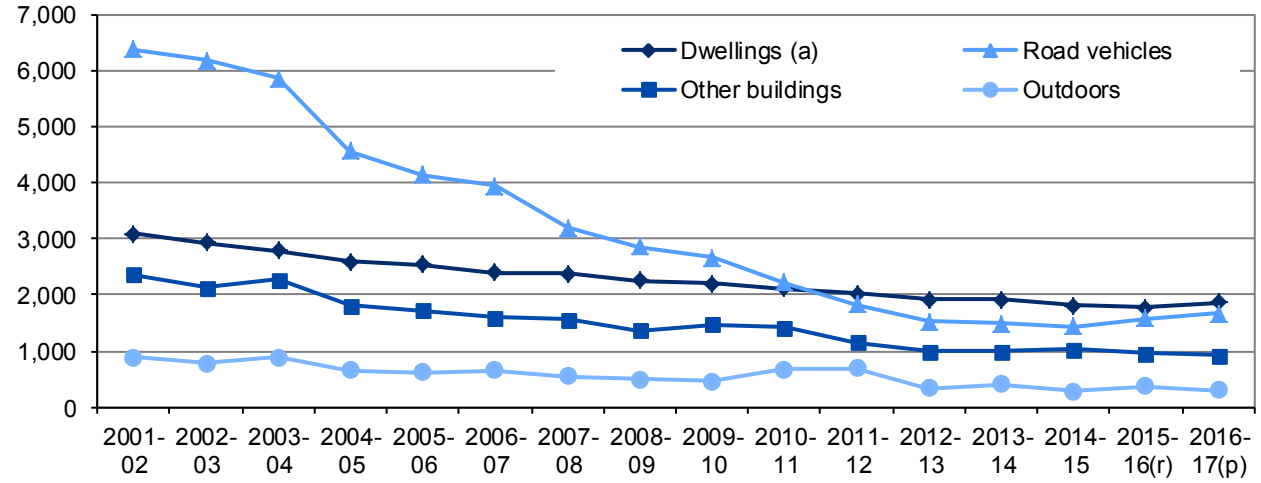
In Wales in 2016-17, 39 per cent of all primary fires were in dwellings, 35 per cent in road vehicles, 20 per cent in other buildings and 6 per cent were outdoor fires. Road vehicle and dwelling fires both saw increases in 2016-17 (of 6 per cent and 5 per cent respectively). The increase in road vehicle fires was driven by an 11 per cent rise in those set deliberately.

Since 2001-02 dwelling fires have fallen by 40 per cent (table 3 and chart 6). In recent years FRAs have targeted their programmes of Home Fire Safety Checks (HFSCs) at dwellings with identified risk factors (e.g. age, sensory/mobility impairment, domestic violence etc.) In 2015-16 FRAs in Wales completed over 53,000 HFSCs, with almost 90 per cent occurring in properties with at least one risk factor[3]. A further 10,000 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 almost three quarters since 2001-02. More analysis of fires in road vehicles can be found in the section ‘Fires by motive’ (page14).

[3] For more information on risk factors see the 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 they 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.

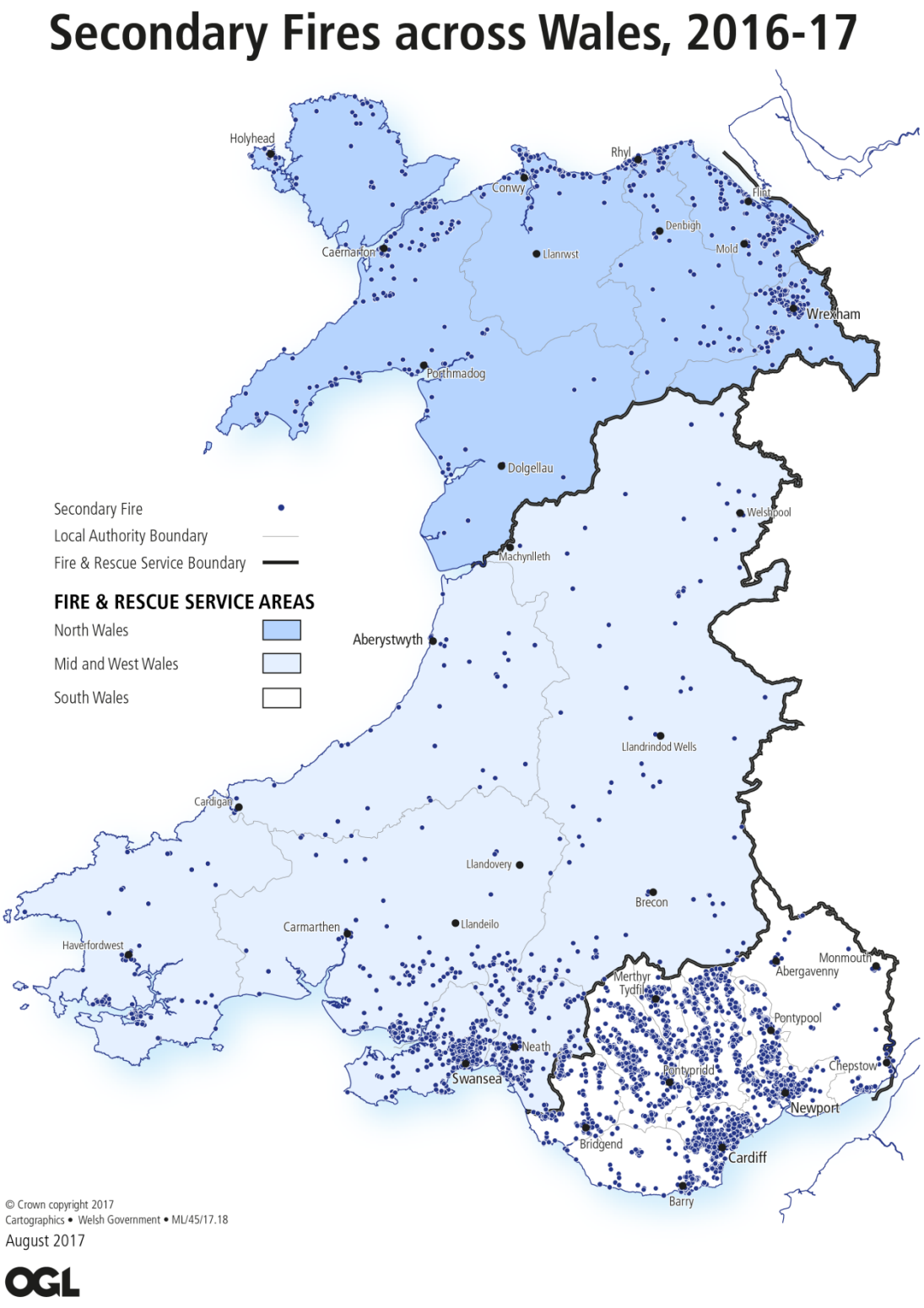
Secondary fires are the most common category of fire attended by Welsh FRAs, accounting for 62 per cent of all fires since 2001-02. However since 2012-13, secondary fires have accounted for between 52 and 59 per cent of all fires and this drop in the proportion can be largely attributed to a fall in the number of deliberate outdoor fires. Numbers of deliberate fires are explored in more detail in the section Fires by motive (page14).

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2007-08	2,000	4,167	10,185	**16,352**
2008-09	1,544	3,008	7,172	**11,724**
2009-10	1,543	2,834	7,185	**11,562**
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(r)	918	1,797	4,283	**6,998**
2016-17(p)	779	1,330	3,469	**5,578**
Percentage change 2015-16 to 2016-17	-15	-26	-19	**-20**

(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 5,578 secondary fires in 2016-17, a decrease of 20 per cent on 2015-16. This is the lowest figure in the available time series (beginning in 1995-96). Compared with the previous year, all Welsh FRAs saw decreases; a fall of 15 per cent in North Wales, 26 per cent in Mid and West Wales and 19 per cent in South Wales. In South Wales secondary fires accounted for 6 in 10 fires in the area in 2016-17. In North Wales and Mid and West Wales the proportions were 39 per cent and 45 per cent respectively.

Grassland fires: In 2016-17, 4,430 (79 per cent of) secondary fires occurred on grassland, woodland, crops and other land. This is a decrease of 26 per cent since the previous year (equating to over 1,500 fewer fires) and is 37 per cent lower than the average since 2009-10. The number of these fires is likely to have been influenced by weather conditions; for example, 2012-13 saw the second lowest number of secondary fires in the time series and was also the second wettest financial year since 1910-11; it also saw the least hours of sunshine since 1991-92. Further analysis using weather data is shown in the section 'fires by motive' (page 14).

Aside from those occurring on grassland, woodland, crops and other land, a further 17 per cent 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 4 per cent.

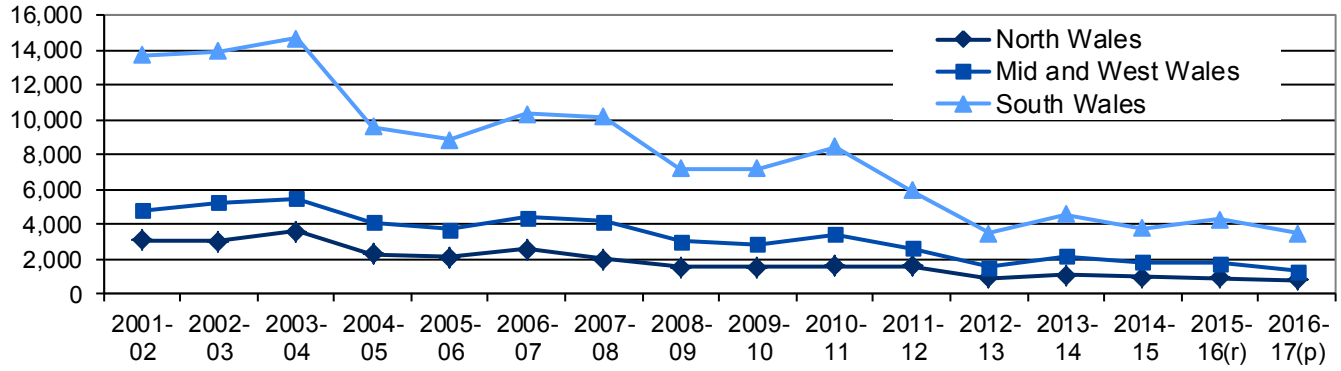
Refuse fires: In 2016-17, 61 per cent of secondary fires were classed as refuse fires[4]. The number of these fires increased slightly (1 per cent) from 3,379 in 2015-16 to 3,415 in 2016-17. Overall there has been a downward trend in refuse fires, falling by a third since 2009-10, although in recent years there has been some fluctuation and this most recent figure is the highest since 2011-12. As with other outdoor fires, numbers are likely to be affected by weather conditions. Over three-quarters of refuse fires in 2016-17 occurred on loose refuse. A number of projects including 'Tidy Towns[5]' and 'Fly Tipping Action Wales[6]' are attempting to address the issues of litter and fly-tipping. In 2015-16, the number of fly-tipping incidents (recorded by local authorities) in Wales increased by 14 per cent compared with the previous year, but has remained 34 per cent 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[7]. 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.

In 2016-17, the majority of secondary fires (62 per cent) occurred in South Wales. Mid and West Wales accounted for 24 per cent of all secondary fires and 14 per cent were in North Wales. However the number of secondary fires in all 3 Welsh FRAs has seen substantial falls since 2001-02; 78 per cent in North Wales and 76 per cent in both Mid and West Wales and South Wales.

[4] Data on refuse fires can be found in StatsWales table 'Fires by detailed location and motive'
[5] Keep Wales tidy – tidy towns
[6] Flytipping Action Wales
[7] Keep Wales Tidy – Eco schoolshttp://www.keepwalestidy.org.uk/eco-schools

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



(r) Revised data.
(p) Provisional data

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 2016-17, there were 417 chimney fires in Wales, a decrease of 3 per cent compared with 2015-16. The majority of these fires occurred in dwellings (96 per cent).

Both North Wales and South Wales FRAs saw decreases in the number of chimney fires, 13 per cent and 5 per cent respectively; however there was a rise of 6 per cent in Mid and West Wales (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**
2007-08	279	254	87	**620**
2008-09	380	326	106	**812**
2009-10	351	330	109	**790**
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(r)	173	186	73	**432**
2016-17(p)	151	197	69	**417**
Percentage change 2015-16 to 2016-17	-13	6	-5	**-3**

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

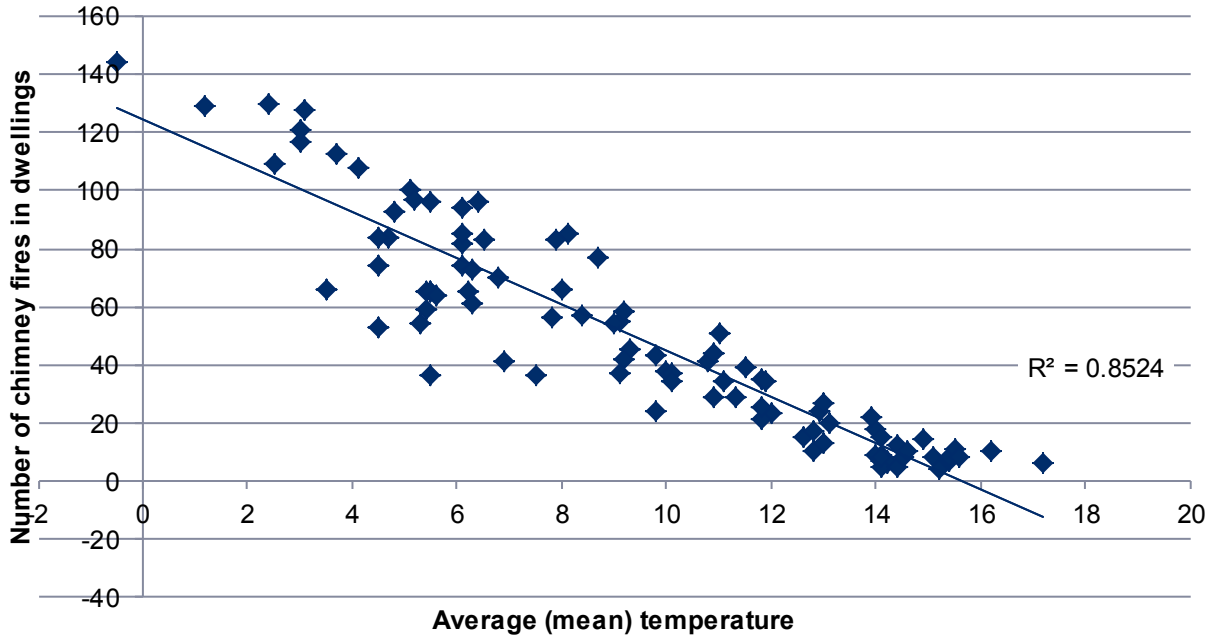
Statistical analysis of chimney fire and temperature data

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 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 2016-17. The R^2 value of 0.85 indicates a strong correlation in the data which is also intuitive, that in colder months the FRAs are required to attend more chimney fires.

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

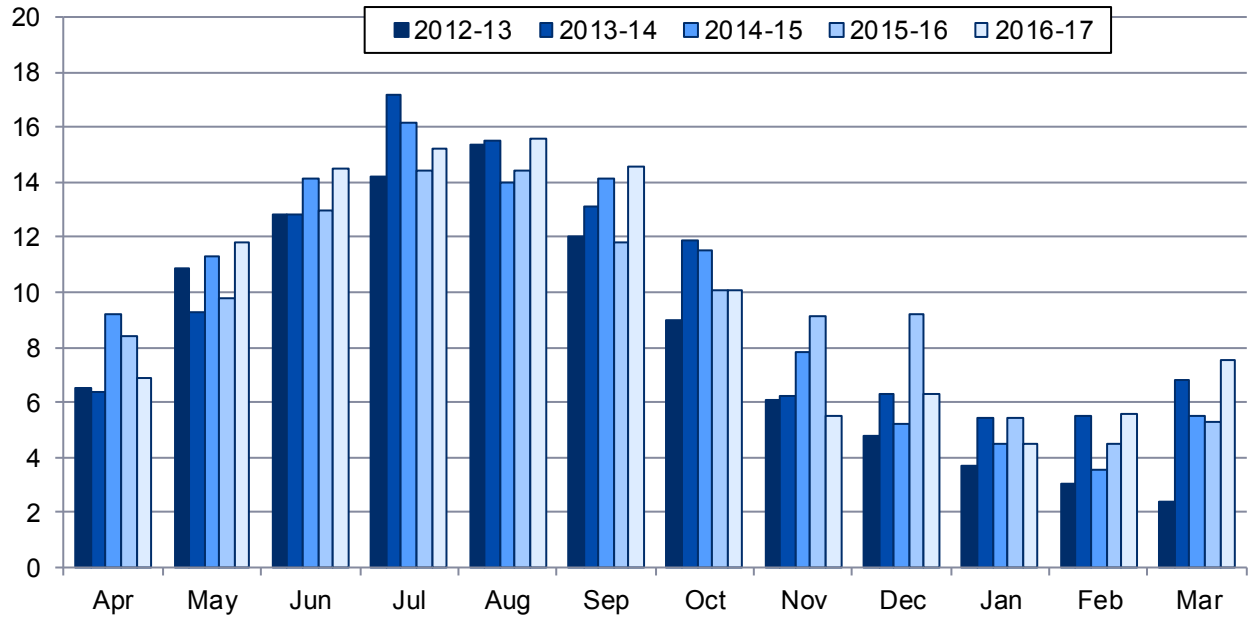


Source: Mean temperature data from the Met Office

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

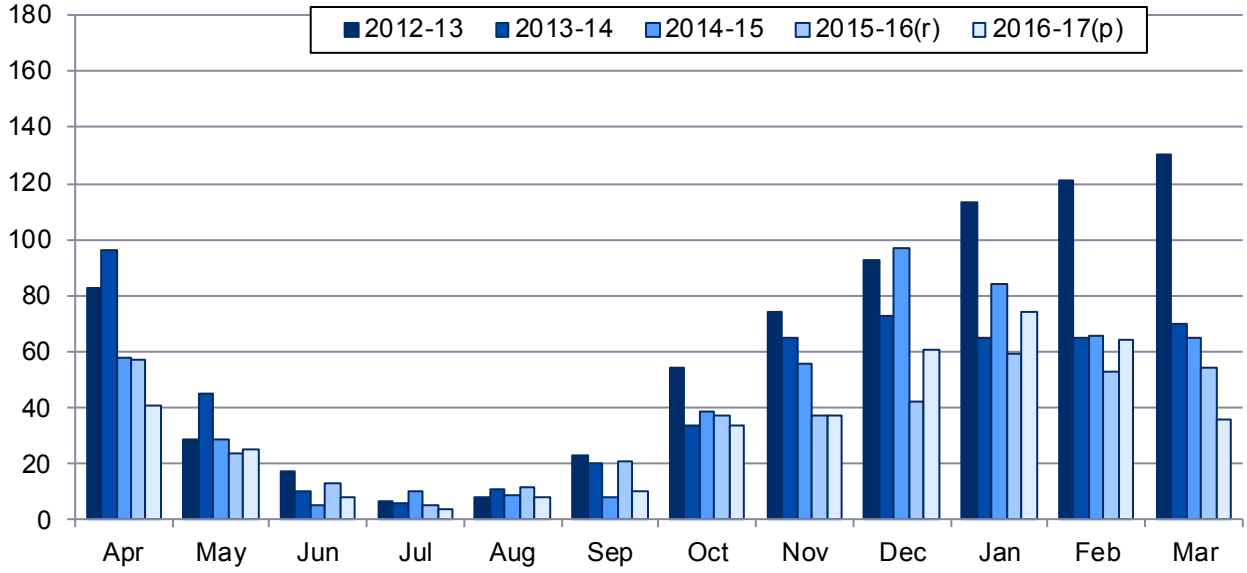
As might be expected, the number of chimney fires in dwellings is higher in the winter and colder months, for example in the charts 8b and 8c we see that the coldest month shown (March 2013) corresponds to the month with the highest instance of chimney fires. Conversely March 2017 saw the highest temperature for March (of those shown) and corresponds to the lowest number of chimney fires. Similar patterns can be seen throughout the time series.

Chart 8b: Mean temperature by month



Source: Met Office[8]

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



(r) Revised data.
(p) Provisional data

Further data on this topic is available on StatsWales.

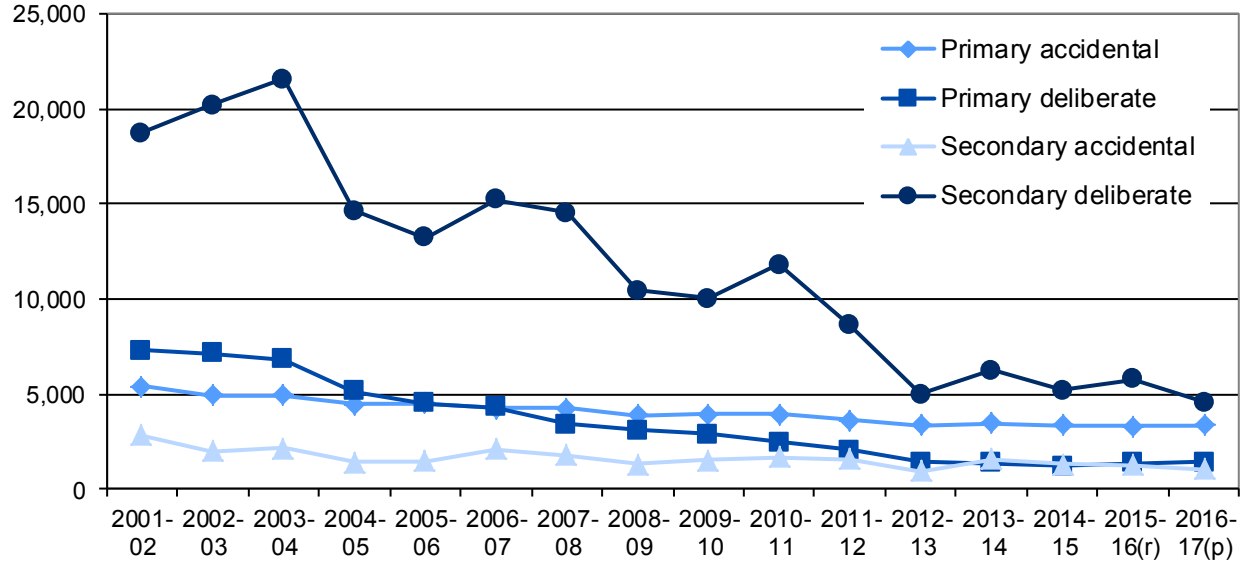
[8] Met Office datasetshttp://www.metoffice.gov.uk/climate/uk/summaries/datasets

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.

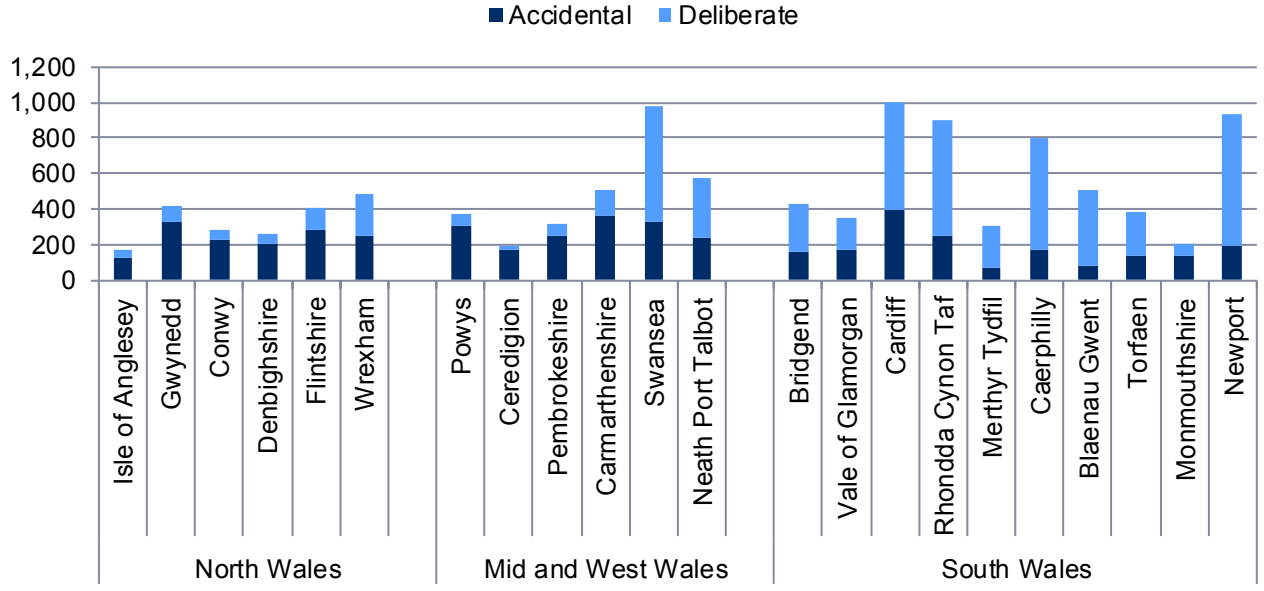
The chart below shows that numbers of deliberate secondary fires have been prone to fluctuation, whilst the other categories shown are less volatile.

Chart 9: Number of fires by type and motive



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

Chart 10: Number of accidental and deliberate fires by Local Authority 2016-17(p)

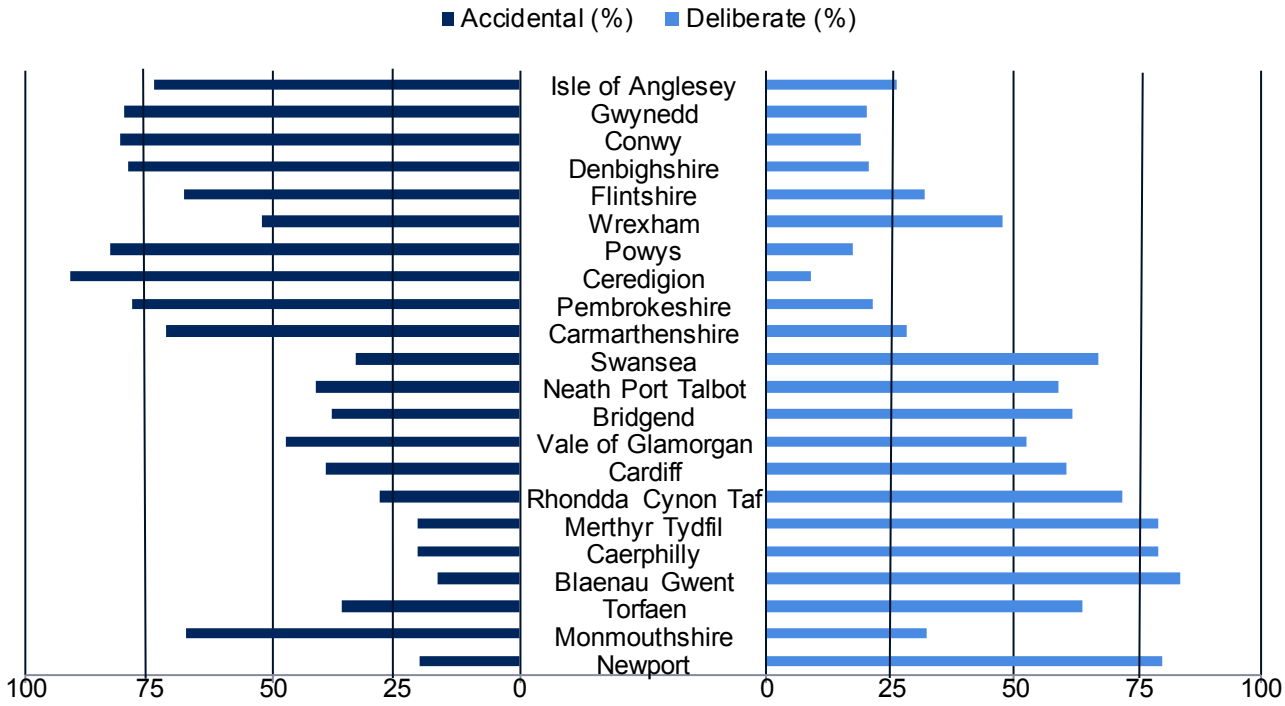


(p) Provisional data

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

Chart 11 further shows in 4 local authorities (Blaenau Gwent, Newport, Caerphilly and Merthyr Tydfil) over 75 per cent of fires were started deliberately, (where Blaenau Gwent has the highest percentage at 84 per cent). In 6 Local Authorities (Pembrokeshire, Ceredigion, Powys, Denbighshire, Conwy and Gwynedd) less than 25 per cent of fires were started deliberately, where Ceredigion has the lowest percentage (9 per cent).

Chart 11: Percentage of accidental and deliberate fires by Local Authority 2016-17(p)



Accidental fires

In 2016-17, the number of accidental fires fell by 3 per cent compared to the previous year, (equating to 165 fewer accidental fires) and since 2001-02 the number has fallen by 47 per cent. Accidental fires accounted for 45 per cent of all fires attended in 2016-17, 4 percentage points higher than in the previous year. 71 per cent of all primary fires and 19 per cent of secondary fires were accidental. Almost all chimney fires in 2016-17 were accidental.

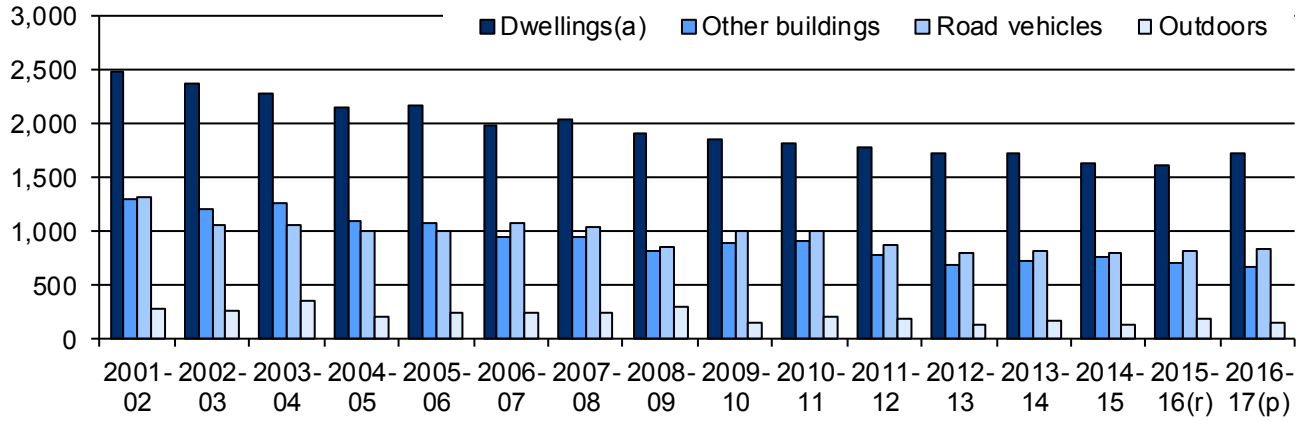
In 2016-17 the number of accidental primary fires increased by 2 per cent whilst the number of accidental secondary fires fell by 17 per cent (compared with 2015-16).

A large proportion of accidental primary fires occur in dwellings, equating to between 46 per cent and 52 per cent for each year since 2001-02. The number of accidental dwelling fires rose by 7 per cent in 2016-17 although in general there has been a downward trend in these fires (as can be seen in chart 12), dropping by 31 per cent between 2001-02 and 2016-17. Most dwelling fires (93 per cent) started accidentally in 2016-17, similar to the proportion seen in recent years but more than 10 percentage points higher than in 2001-02.

In recent years the proportion of primary fires in road vehicles which started accidentally has increased from 21 per cent in 2001-02 to 50 per cent in 2016-17. However, in this time the number of accidental fires in road vehicles has fallen by 37 per cent.

The increase in proportion of dwelling fires and road vehicle fires starting accidently can be largely attributed to the decreases in deliberate dwelling and road vehicle fires. See page 17 for more information on deliberate fires.

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 2016-17 all 3 FRAs saw increases in the number of accidental primary fires in dwellings compared with the previous year, as shown in table 6.

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**
2007-08	526	642	867	**2,035**
2008-09	482	638	799	**1,919**
2009-10	478	584	802	**1,864**
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(r)	385	542	682	**1,609**
2016-17(p)	433	595	691	**1,719**
Percentage change 2015-16 to 2016-17	12	10	1	7

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

44 per cent of accidental dwelling fires occurred between the hours of 4pm and 10pm[9]. Analysis on page 39 relates to cause and source of ignition and shows that, cooking appliances were the main source of ignition, being responsible for almost half of the accidental dwelling fires in 2016-17. In around 10 per cent of accidental dwelling fires alcohol or drugs were recorded as a contributory factor to the start of the fire.

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

Deliberate fires

Over the years there have been a number of national programmes for dealing with deliberate fires for instance the Wales Arson Reduction Strategy (WARS) in 2007[10] (it was reviewed in 2009 with an update strategy for 2012-15 published in 2012[11]).

More information on the Joint Arson group and associated initiatives can be found here.

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[12], offences against vehicles in Wales have fallen by 72 per cent and thefts or unauthorised taking of vehicles have fallen by 82 per cent between 2002-03 and 2016-17. However in 2016-17 vehicle offences increased by 4 per cent compared with 2015-16, this is the first annual increase in the available time series. Following a similar pattern, the first annual increase (for the time series) in deliberate vehicle fires occurred in 2015-16 (19 per cent) and subsequently further increased in 2016-17 (by 11 per cent).

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 96,000 children and young people received Fire Safety talks[13] at school in 2015-16 (the first year in which this data was collected).

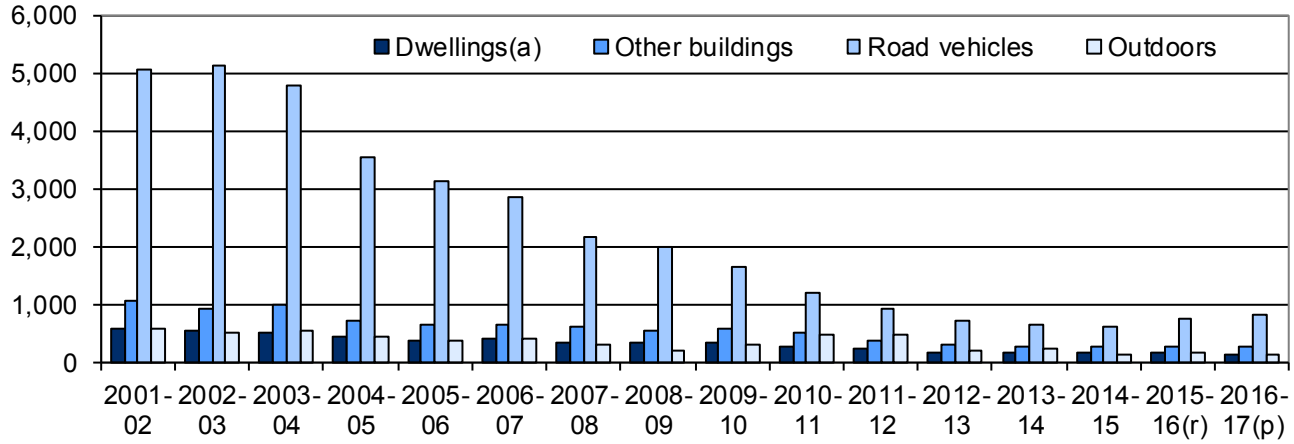
Work has also been done to inhibit the spread of fires; Natural Resources Wales has examined how changes in land and forestry management methods can be used to make grasslands less conducive to fires or be better structured to control the spread of fires and firefighters have also been involved in developing firebreaks on some of our valleys' hillsides, using the latest techniques learned internationally.

There were 1,393 deliberate primary fires in 2016-17, 2 per cent more than in 2015-16 but 81 per cent fewer than in 2001-02. Deliberate primary fires accounted for 29 per cent of all primary fires in 2016-17.

Around 6 in 10 deliberate primary fires occurred in road vehicles. However the number of deliberate primary fires in road vehicles is around one sixth of the number occurring in 2001-02.

[10] Wales Arson Reduction Strategy - Report of the Joint Arson Group August 2007
[11] Wales Arson Reduction Strategy
[12] ONS Crime Statistics 2016-17
[13] StatsWales table - Children and Young People Interventions by Participant and Interventions

Chart 13: Number of deliberate 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 2016-17, around 4 in 5 secondary fires were deliberate, similar to the proportion seen in the previous 3 years. In this year the number of these fires fell by 21 per cent compared with 2015-16.

Over half of all deliberate secondary fires were classed as 'Other outdoors (including land)' in 2016-17 but numbers fell by 2 per cent compared with the previous year. The majority of these fires (96 per cent) occurred on loose refuse.

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

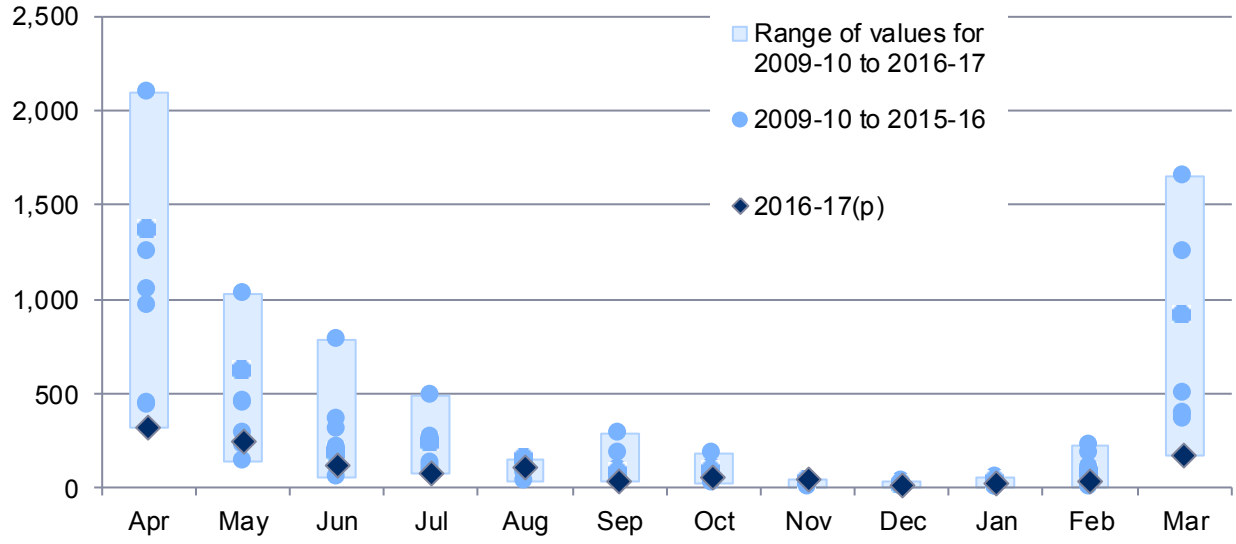
	2012-13	2013-14	2014-15	2015-16(r)	2016-17(p)
Derelict building	131	91	60	56	95
Derelict road vehicle	26	24	28	26	66
Outdoor(b)	4,836	6,109	5,132	5,675	4,381
Grassland, woodland and crops	1,731	2,912	1,910	2,518	1,270
Outdoor structures	786	760	682	653	651
Outdoor equipment and machinery	15	15	6	8	9
Other outdoors (including land) (c)	2,303	2,419	2,534	2,496	2,451
All deliberate secondary fires	**4,993**	**6,224**	**5,220**	**5,757**	**4,542**

(a) Fires in non-derelict buildings, non-derelict road vehicles and non-derelict transport vehicles are primary fires.
(b) Outdoor fires include 3 secondary fires in 2010-11, 1 secondary fire in 2011-12, 1 secondary fire in 2012-13 and 3 in 2013-14, in derelict 'other transport vehicles'.
(c) Other outdoors includes the following locations: loose refuse, river/canal, lake/pond/reservoir, sea, road surface/pavement, railway, airfield/runway, cycle path/public footpath/bridleway, cemetery, park, beach, landfill site, wasteland, mines and quarries (excluding buildings above ground), golf course, playground (excluding equipment)/recreational area.
(r) Revised data.
(p) Provisional data.

Fires on grassland, woodland or crops accounted for 28 per cent of deliberate secondary fires in 2016-17 and numbers of these fires fell by half compared with the previous year. The chart below shows the peaks for these fires tend to occur in April, May and March, and since 2009-10 these 3 months have accounted for 69 per cent of the deliberate secondary fires on grassland, woodland and crops.

In April 2016 there were 74 per cent fewer fires than in April 2015, following a large increase the previous year. The 324 fires seen in April 2016 is the lowest figure for April for the available time series. It is likely that this year-on-year fall is due to a combination of initiatives and programmes undertaken by the FRAs and weather conditions and consequential environmental conditions; April 2016 saw 21 per cent fewer hours of sunshine and 150 per cent more millimetres of rain, compared with April 2015.

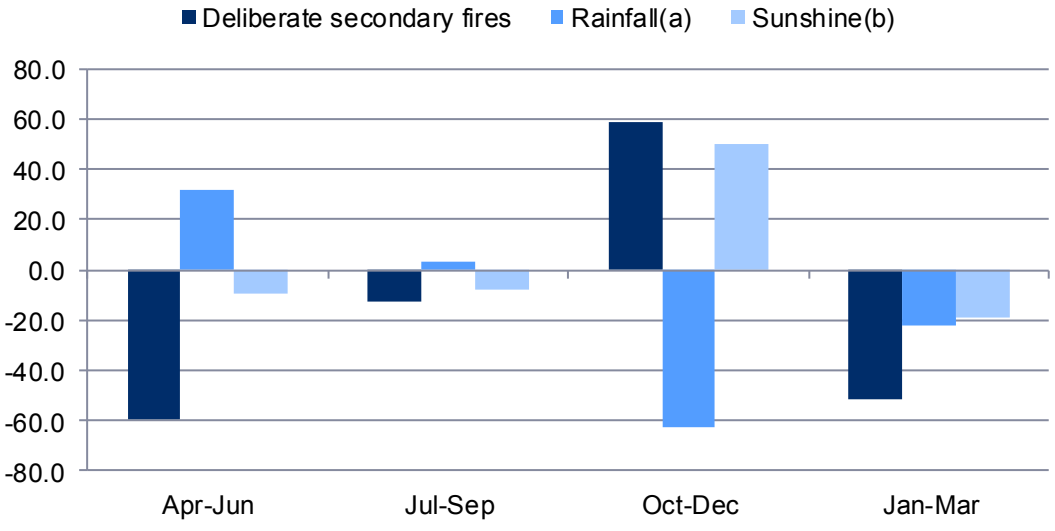
Chart 14: Number of deliberate secondary grassland, woodland and crop fires by month



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

Seven months in 2016-17 saw a decrease in numbers of deliberate grassland, woodland and crop fires; April 2016 (74 per cent), June 2016 (46 per cent), July 2016 (21 per cent), September 2016 (57 per cent), October 2016 (8 per cent), February 2017 (57 per cent) and March (54 per cent). All of these months except October saw a decrease in hours of sunshine compared with the same month in the previous year, and four of these months (April 2016, June 2016, September 2016 and March 2017) saw increases in rainfall.

Chart 15: Percentage change (2015-16 to 2016-17) in deliberate secondary grassland, woodland and crop fires, rainfall and hours of sunshine by quarter



(a) Percentage change in rainfall (measured in mm).
(b) Percentage change in sunshine (measured in hours.

Chart 15 illustrates how 3 quarters of 2016-17 follow a pattern; an increase in rain and decrease in sunshine leads to a decrease in fires, or a decrease in rain and an increase in sunshine leads to an increase in fires. The exception was the January to March quarter. A closer look at these months reveals that January and March in this year also follow this pattern whilst February bucks the trend,

which saw a reduction in fires, rainfall and sunshine. To further understand this it would be necessary to look at daily or regional data which are not currently available.

Met Office summary data are only available at an all Wales level for each month. Therefore the data may not reflect regional variations in weather conditions.

Further data on this topic is available on StatsWales.

Met Office data are available here.

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 19 fatal casualties during 2016-17 (see table 8). The overall trend in fatalities since 2001-02 has been downward (see chart 16), although since 2008-09 the number has varied between 17 and 23. In 2016-17 the fatality rate per million population (pmp) was lowest in South Wales at 4.6 pmp.

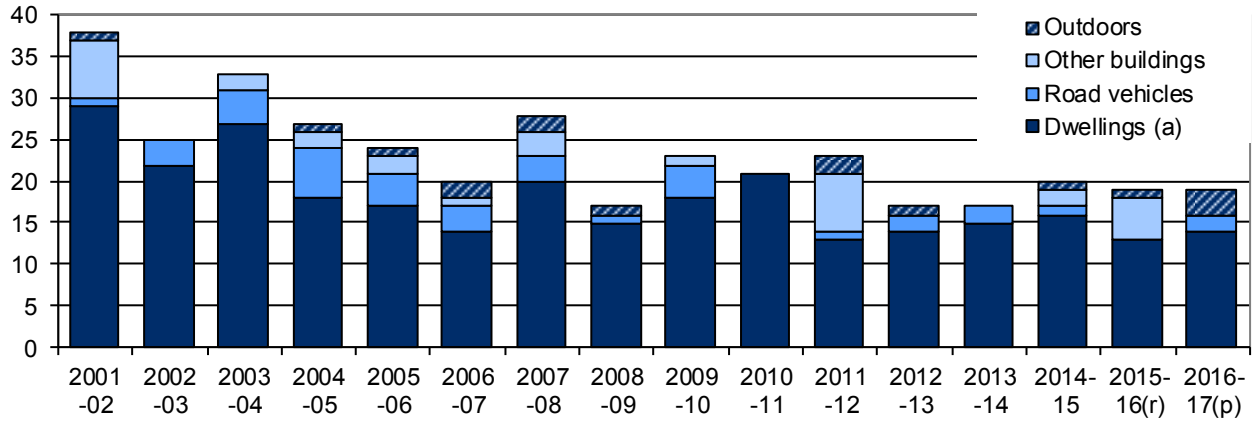
Table 8: Number and rate of fatal casualties from fires by Fire and Rescue Authority

	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)**
2007-08	7	10.3	9	10.2	12	8.3	**28**	**9.3**
2008-09	3	4.4	5	5.6	9	6.2	**17**	**5.6**
2009-10	8	11.7	11	12.4	4	2.7	**23**	**7.6**
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(r)	6	8.6	4	4.4	9	6.0	**19**	**6.1**
2016-17(p)	5	7.2	7	7.8	7	4.6	**19**	**6.1**

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

In the 16 years since 2001-02, 77 per cent of fatal casualties occurred in dwelling fires, equating to a total of 286 out of 371 fatalities. Almost three quarters of fatalities occurring in 2016-17 were the result of dwelling fires.

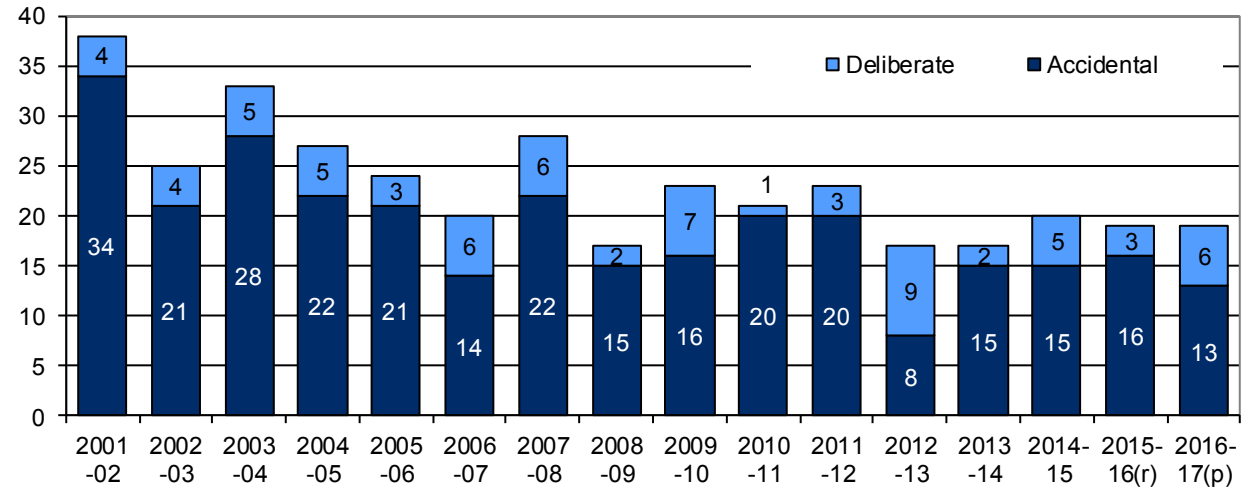
Chart 16: Number of fatal casualties from fires by location



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

In 2016-17 13 fatalities were the result of accidental fires, all occurring in dwellings. There were 6 fatalities as the result of deliberate fires.

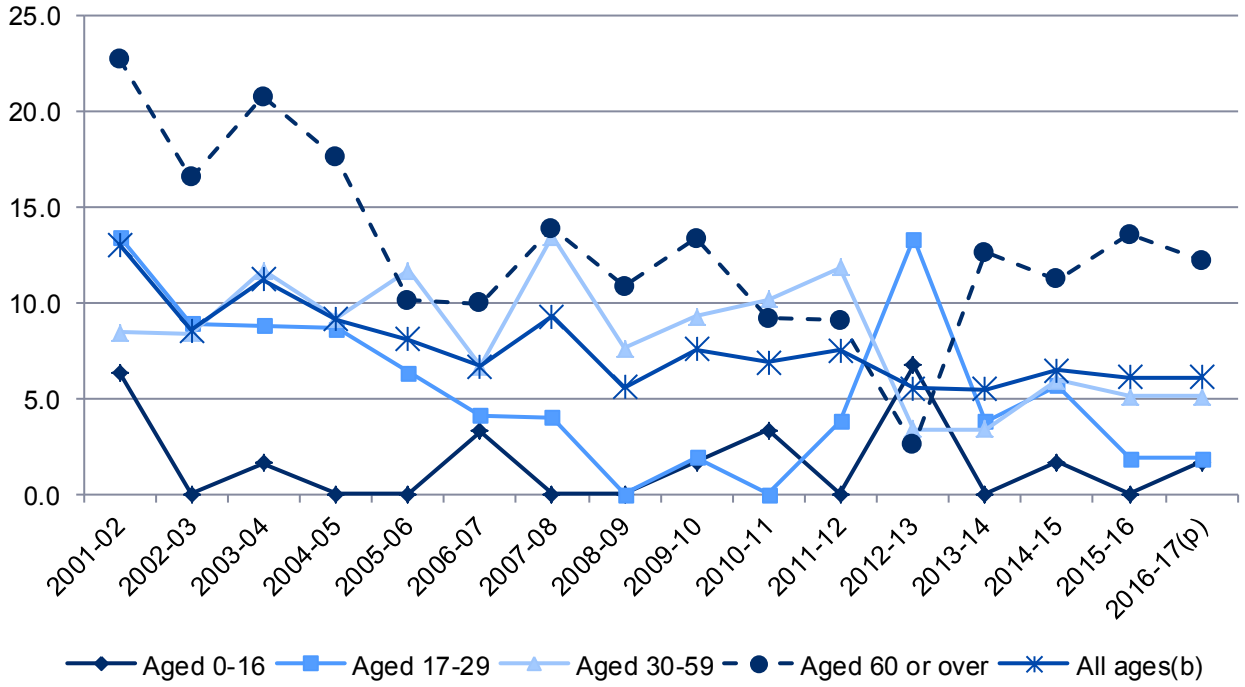
Chart 17: Number of fatal casualties from fires by motive



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

For most of the time series the age group '60 or over' has the highest fatality rate, with 12.2 per million population in 2016-17, double the rate for all ages. Around 6 per cent of casualties in this age bracket were fatalities; 3 per cent of 30-59 year old casualties were fatalities, whilst the corresponding percentage for 0-16 and 17-29 was 1 per cent.

Chart 18: Fatalities per million population(a), by age group

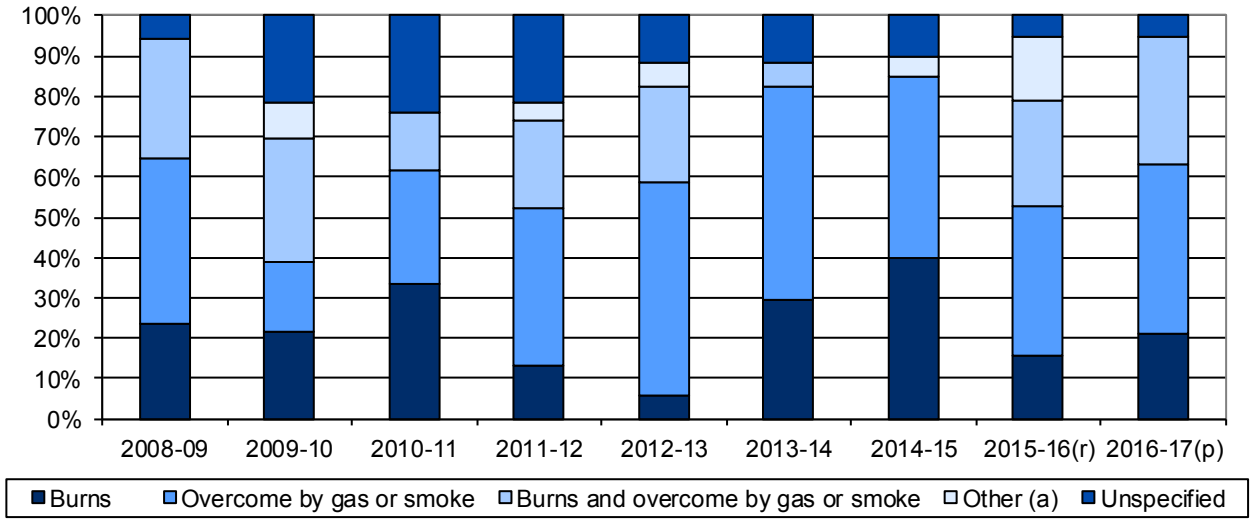


(a) Population data are taken from ONS Mid Year Estimates revised periodically and so rates are subject to change between publications. Rates are calculated per age group.
(b) Includes fatalities of unknown age.
(p) Provisional data.

During 2016-17 the two main known causes of death from fires in Wales were being 'overcome with smoke or gas' and a combination of 'burns' and 'being overcome by gas or smoke', accounting for 8 and 6 deaths respectively.

Since 2001-02 'being overcome by smoke or gas' has accounted for 46 per cent of fatalities, 'burns' accounted for 22 per cent of fatalities and a combination of the two caused 20 per cent of fatalities.

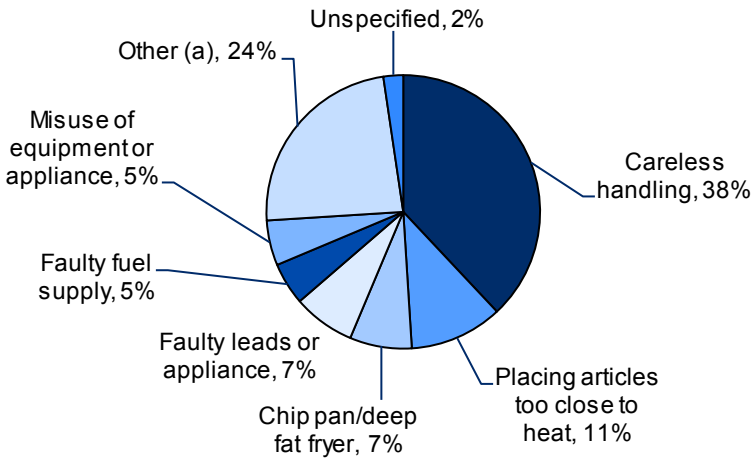
Chart 19: Percentage of fatal casualties by cause of death



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

Of the 300 fatalities occurring in accidental fires from 2001-02 to 2016-17, in 38 per cent of fires the cause of the fire was recorded as 'careless handling'; causes of fires are looked at in more detail in pages 39 to 43. Between 2001-02 and 2016-17, 22 fatalities (7 per cent) were in fires caused by chip or deep fat fryers.

Chart 20: Percentage of fatal accidental fires by cause 2001-02 to 2016-17



(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 2016-17, Mid and West Wales had the lowest rate of non-fatal casualties per million population. The overall trend in the non-fatal casualty rate over the last ten years has been downward, although in recent years the numbers and associated rates have fluctuated.

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)**
2007-08	209	307.6	178	202.3	245	169.3	**632**	**210.2**
2008-09	208	304.7	149	168.3	300	205.7	**657**	**217.1**
2009-10	234	341.8	158	178.1	183	124.7	**575**	**189.2**
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	308.5	151	168.5	177	119.0	**541**	**176.0**
2013-14	276	398.9	167	186.2	183	122.5	**626**	**203.1**
2014-15	194	279.5	194	215.9	155	103.4	**543**	**175.6**
2015-16(r)	213	306.7	177	196.8	202	134.2	**592**	**191.0**
2016-17(p)	194	278.8	153	169.6	274	180.8	**621**	**199.5**

(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.

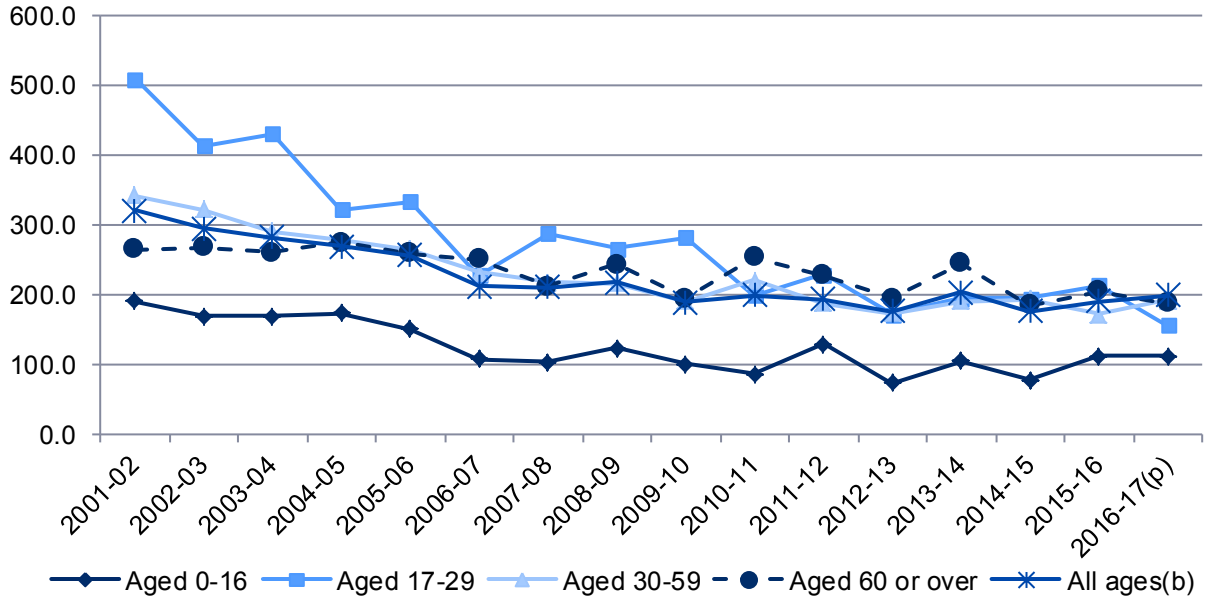
(r) Revised data

(p) Provisional data.

621 non-fatal casualties were recorded in 2016-17, an increase of 5 per cent compared with the previous year. The increase was driven by a rise in the numbers of those receiving first aid or advised to have a precautionary check, up by 29 per cent compared with 2015-16. Over the same time period numbers of those sent to hospital fell by 25 per cent. In 2016-17, over two thirds of non-fatal casualties received first aid or were advised to have a precautionary check-up.
27 per cent of non-fatal casualties were taken to hospital with slight injuries and the remaining 6 per cent were taken to hospital with severe injuries.

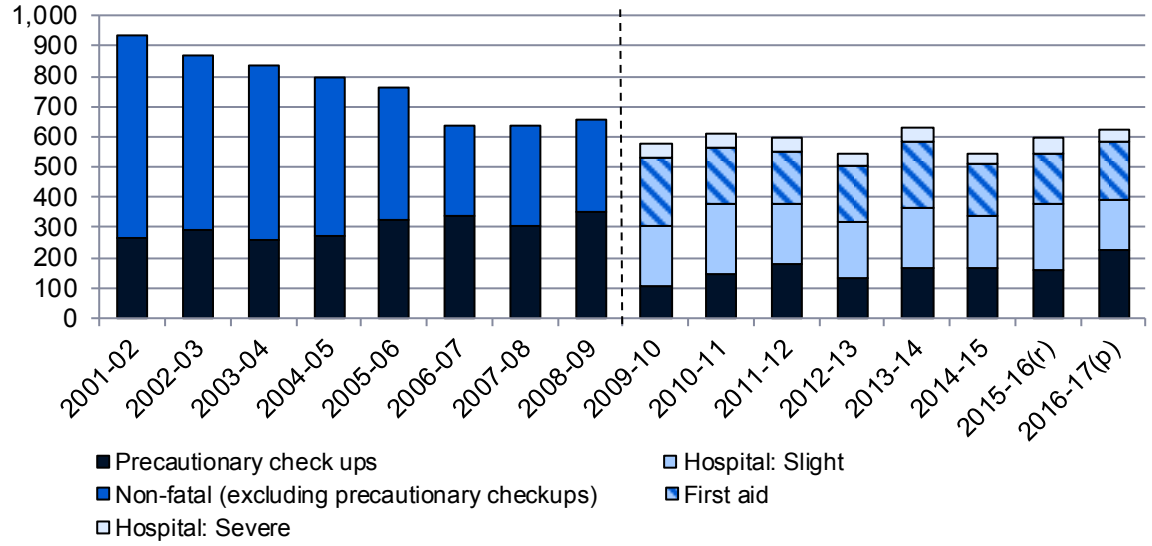
Those aged 16 and under have consistently had the lowest non-fatal casualty rate per million population, with 111.5 in 2016-17. At the beginning of the time series the highest rate of casualties per million population occurred in the 17-29 age group, but over recent years the rate has dropped to be more in line with the other age groups shown; in 2016-17 this age group had the second lowest rate, 156.0 per million population.

Chart 21: 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.
(p) Provisional Data

Chart 22: 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 621 non-fatal casualties in 2016-17, 512 (82 per cent) were the result of in dwelling fires, 47 (8 per cent) in other buildings, 38 (6 per cent) from road vehicle fires and 24 (4 per cent) in outdoor fires.

Most non-fatal casualties (88 per cent) were from accidental fires and 75 per cent were the result of accidental dwelling fires. 12 per cent of non-fatal casualties in 2016-17 came from deliberate dwelling fires.

Cooking (excluding chip pans) was the largest single cause of non-fatal casualties in accidental fires in 2016-17 (21 per cent). Chip pan related casualties accounted for 15 per cent of those in accidental fires.

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

In 2016-17, 203 non-fatal casualties were sent to hospital, a decrease of 25 per cent compared with the previous year. Of these 203 non-fatal casualties, 89 per cent were from accidental fires and 73 per cent occurred in accidental fires in dwellings.

81 per cent of those casualties 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 92 non-fatal casualties and 45 per cent of those sent to hospital. This has been the most common injury for casualties sent to hospital since 2009-10, accounting for 44 per cent of all non-fatal casualties sent to hospital since this time. There were 43 casualties in 2016-17 with burns, accounting for just over a fifth of those sent to hospital.

Rescues from fires

In 2016-17, 233 people were rescued from fires, 98 (42 per cent) of whom were not injured, 4 were fatalities (rescued but later died from fire-related injuries) and 131 were non-fatal casualties. In total this is a 5 per cent decrease in the number of rescues compared with the previous year.

In 2016-17, the majority (87 per cent) of rescues (including those injured) from fires were from dwelling fires, a further 9 per cent were rescued from other buildings, 3 per cent from road vehicles and less than 1 per cent from outdoor locations.

Table 10: Number of casualties and rescues by location

	Dwelling	Other building	Road vehicle	Outdoors	**All**
2014-15					
Fatalities	16	2	1	1	**20**
of which were rescued	*10*	*0*	*1*	*0*	***11***
Non-fatal casualties (a)	420	47	45	31	**543**
of which were rescued	*103*	*8*	*6*	*2*	***119***
Rescued (non-injured)	75	4	3	0	**82**
Total rescued	188	12	10	2	**212**
2015-16(r)					
Fatalities	13	5	0	1	**19**
of which were rescued	*5*	*0*	*0*	*0*	***5***
Non-fatal casualties (a)	457	65	43	27	**592**
of which were rescued	*118*	*11*	*6*	*0*	***135***
Rescued (non-injured)	81	19	5	1	**106**
Total rescued	204	30	11	1	**246**
2016-17(p)					
Fatalities	14	0	2	3	**19**
of which were rescued	*4*	*0*	*0*	*0*	***4***
Non-fatal casualties (a)	512	47	38	24	**621**
of which were rescued	*117*	*11*	*3*	*0*	***131***
Rescued (non-injured)	82	11	4	1	**98**
Total rescued	203	22	7	1	**233**

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

In 2016-17, 64 per cent of those rescued were male and 36 per cent were female. 36 per cent of those rescued were aged between 30 and 59, whilst nearly a third were aged 60 or over.

For those rescued from fires but not injured, males accounted for 65 per cent (females accounted for 35 per cent). People aged between 30 and 59 accounted for a 33 per cent of those who were rescued but non-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)**
2014-15							
Fatalities	13	7	1	3	7	9	**20**
of which were rescued	*7*	*4*	*1*	*2*	*5*	*3*	***11***
Non-fatal casualties (b)	318	221	46	102	227	148	**543**
of which were rescued	*69*	*50*	*5*	*13*	*53*	*45*	***119***
Rescued (not injured)	45	37	7	27	27	13	**82**
Total rescued	121	91	13	42	85	61	**212**
2015-16(r)							
Fatalities	13	6	0	1	6	11	**19**
of which were rescued	*4*	*1*	*0*	*0*	*2*	*3*	***5***
Non-fatal casualties (b)	343	247	66	112	202	166	**592**
of which were rescued	85	50	3	24	49	46	**135**
Rescued (not injured)	50	56	13	20	30	25	**106**
Total rescued	139	107	16	44	81	74	**246**
2016-17(p)							
Fatalities	9	10	1	1	6	10	**19**
of which were rescued	*3*	*1*	*1*	*0*	*2*	*1*	***4***
Non-fatal casualties (b)	341	258	66	82	225	154	**621**
of which were rescued	81	50	8	14	51	46	**131**
Rescued (not injured)	64	34	7	24	32	28	**98**
Total rescued	148	85	16	38	85	75	**233**

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

Further data on this topic is available on StatsWales.

False alarms

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

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

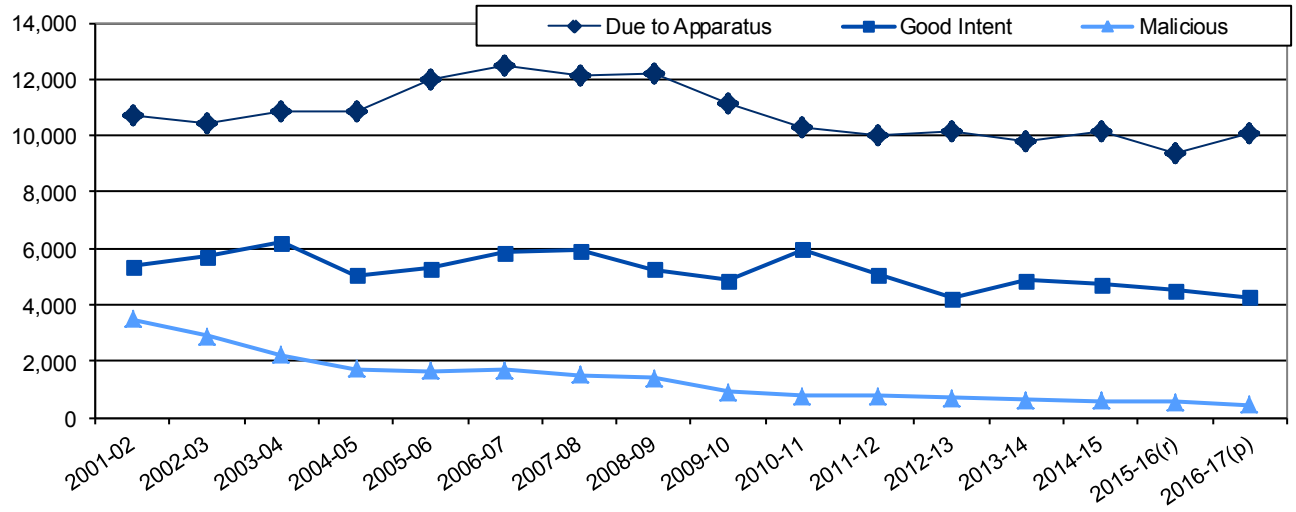
Good intent - in which the call was made in good faith in the belief that there was a fire to attend

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

In 2016-17 there were 14,791 false fire alarms in Wales, up from 14,493 in 2015-16, an increase of 2 per cent (equating to almost 300 incidents), however this is still the second lowest number in the time series. Since 2001-02 the number of false alarms attended has fallen by 24 per cent. FRAs suggest successful call challenging is a factor in this long-term fall (information taken from internal call logging systems).

Only false alarms 'due to apparatus' saw an increase in 2016-17 compared with the previous year (7 per cent). Reasons for false alarms due to apparatus are explored in greater detail in table 14. False alarms due to good intent fell by 5 per cent whilst malicious false alarms fell by 21 per cent.

Chart 23: Number of false alarms by reason



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

Overall there has been a downward trend in the number of malicious false alarms, falling by 87 per cent since 2001-02. All 3 FRAs saw falls in the number of malicious false alarms (24 per cent in South Wales, 19 per cent in Mid and West Wales and 6 per cent in North Wales).

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

	North Wales	Mid and West Wales	South Wales	**Wales**
2007-08	154	473	905	**1,532**
2008-09	169	466	762	**1,397**
2009-10	137	211	550	**898**
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(r)	51	127	380	**558**
2016-17(p)	48	103	290	**441**
Percentage change 2015-16 to 2016-17	-6	-19	-24	-21

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

Table 13: Number of false alarms by location and reason

	2012-13	2013-14	2014-15	2015-16(r)	2016-17(p)
Dwellings (a)	**5,012**	**5,192**	**5,409**	**5,331**	**5,606**
Fire alarm due to apparatus	3,199	3,352	3,499	3,661	3,956
Good intent false alarm	1,501	1,590	1,660	1,456	1,466
Malicious	312	250	250	214	184
Other buildings	**7,751**	**7,218**	**7,332**	**6,375**	**6,705**
Fire alarm due to apparatus	6,979	6,457	6,640	5,744	6,109
Good intent false alarm	505	489	443	386	412
Malicious	267	272	249	245	184
Road vehicles	**399**	**409**	**406**	**391**	**408**
Fire alarm due to apparatus	1	0	0	1	0
Good intent false alarm	382	400	401	380	400
Malicious	16	9	5	10	8
Outdoors	**1,926**	**2,493**	**2,338**	**2,396**	**2,072**
Fire alarm due to apparatus	2	3	6	4	2
Good intent false alarm	1,830	2,375	2,231	2,303	2,005
Malicious	94	115	101	89	65

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

False alarms in buildings other than dwellings accounted for 45 per cent of false alarms in 2016-17, the majority of which (91 per cent) were due to apparatus. A breakdown of more detailed reasons is given in table 14. 71 per cent of false alarms in dwellings were due to apparatus and 26 per cent were raised with good intent. Most (97 per cent) 'other outdoors' false alarms were due to good intent, and these were mainly (65 per cent) 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) [14] in non-domestic properties. This led to a 78 per cent drop in false alarms due to apparatus in 'other buildings' (non-dwellings) being attended in North Wales

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

FRA in 2015-16 (when compared to the previous year). In 2016-17 the number of these false alarms rose again, by 22 per cent, however this is still 73 per cent lower than the 2014-15 figure.

In 2016-17, 36 per cent of false alarms due to apparatus (in buildings) were the result of human causes, with cooking causing over 2,000 of these false alarms (a fifth of false alarms due to apparatus). Human factors triggered a greater proportion of false alarms in dwellings then in other buildings (44 per cent and 30 per cent respectively).

Of those false alarms in buildings which were due to apparatus, 38 per cent were the result of problems with safety systems (faulty, damaged, poorly maintained and poorly sited). A further 18 per cent 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 more than a fifth of false alarms due to apparatus, but just over a tenth of those in dwellings.

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

	2012-13	2013-14	2014-15	2015-16(r)	2016-17(p)
Dwellings(a)					
Contaminants	343	366	390	411	399
External factors	51	56	35	45	42
Human	1,451	1,573	1,651	1,665	1,749
Accidentally/ carelessly set off	*148*	*171*	*173*	*166*	*159*
Cooking/burnt toast	*1,085*	*1,233*	*1,260*	*1,267*	*1,305*
Smoking	*107*	*74*	*102*	*112*	*146*
Testing	*67*	*61*	*68*	*95*	*92*
Other	*44*	*34*	*48*	*25*	*47*
System: smoke alarm	872	887	888	1,059	1,229
System: other(b)	350	350	413	309	345
Animal(c)	5	4	1	5	6
Unknown	127	116	121	167	186
All	**3,199**	**3,352**	**3,499**	**3,661**	**3,956**
Other buildings					
Contaminants	1,566	1,521	1,485	1,224	1,363
External factors	154	147	182	110	117
Human	2,096	2,151	2,130	1,869	1,845
Accidentally/ carelessly set off	*703*	*718*	*689*	*639*	*632*
Cooking/burnt toast	*854*	*835*	*882*	*739*	*711*
Smoking	*98*	*95*	*118*	*116*	*138*
Testing	*386*	*429*	*388*	*338*	*314*
Other	*55*	*74*	*53*	*37*	*50*
System: smoke alarm	1,696	1,389	1,502	1,388	1,574
System: other (b)	1,021	906	948	678	650
Animal(c)	23	21	20	21	28
Unknown	423	322	373	454	532
All	**6,979**	**6,457**	**6,640**	**5,744**	**6,109**

(a) Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.
(b) Includes heat, sprinkler, flame and other unspecified systems.
(c) Category introduced in 2012-13.
(r) Revised data.
(p) Provisional data.

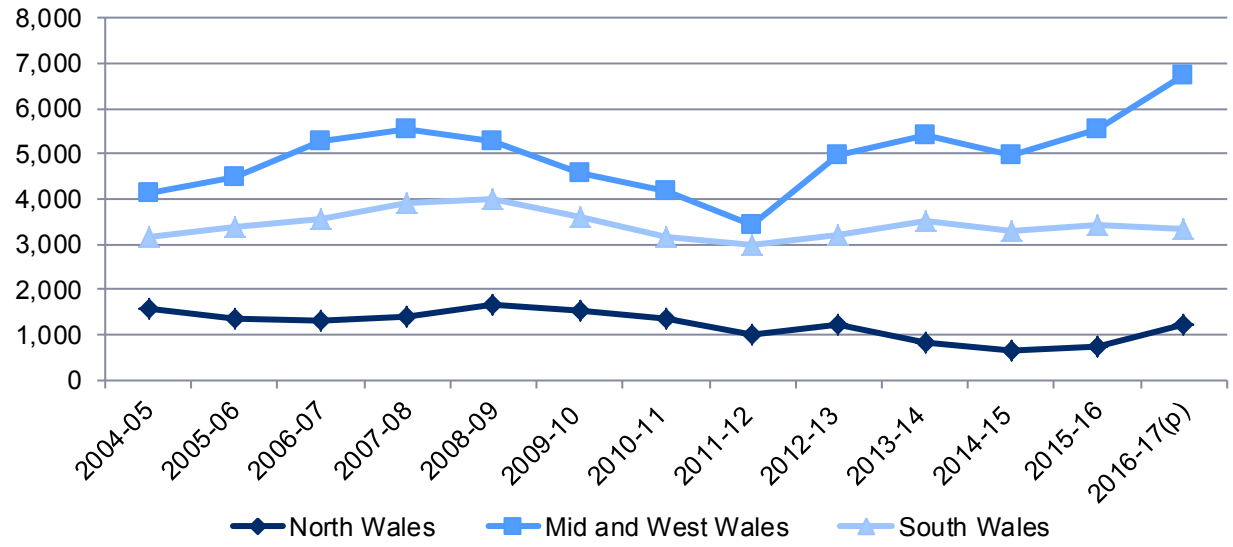
Further data on this topic is available on StatsWales.

Special service incidents

This is the first year that data on Special Service Incidents have been included in this bulletin, although data has been published on StatsWales since 2013-14.

In 2016-17, 31 per cent 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. Overall attendance at SSIs increased by 16 per cent, with both North Wales and Mid and West Wales seeing larger increases (60 per cent and 21 per cent respectively). South Wales saw a fall of 3 per cent in SSIs. Mid and West Wales have seen the greatest variation in numbers, and recent increases have been due to numbers of attendances at medical incidents. North Wales attend the fewest SSIs, due in part to a different system of working so that attendance at medical incidents (as first responder) is not required.

Chart 24: Number of SSIs attended by Fire and Rescue Authority(a)



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

The largest category of SSI attended is medical incidents (37 per cent of SSIs), followed by RTCs (21 per cent). In 2016-17 numbers of medical incidents rose by 53 per cent compared with the previous year; this may be due to greater collaboration with the ambulance services. Also notably, numbers of attendances categorised as 'assisting other agencies' more than doubled.

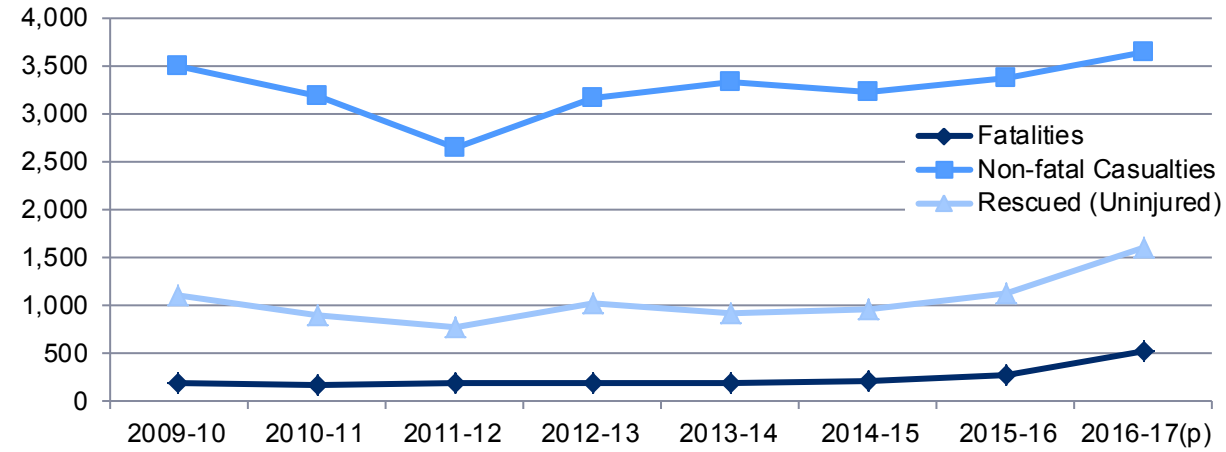
Table 15: Number of SSIs by type

	2012-13	2013-14	2014-15	2015-16	2016-17(p)
Road traffic collision	2,639	2,787	2,564	2,612	2,393
Flooding	1,241	765	385	650	546
Rescue or evacuation from water	173	108	80	141	123
Other rescue/release of people	269	217	228	296	281
Animal assistance incidents	409	427	351	314	328
Making Safe	284	729	258	332	233
Lift release	286	361	346	372	399
Effecting entry	555	507	556	540	581
Medical incident - Co-responder/First responder	1,744	2,058	2,382	2,725	4,174
Assist other agencies	428	380	451	468	988
Other(a)	1,378	1,422	1,288	1,280	1,202
All Special Service Incidents	**9,406**	**9,761**	**8,889**	**9,730**	**11,248**
All Special Service False Alarms	319	357	400	423	427

(a) Other includes 'other transport incident', 'animal assistance incidents', 'making safe', 'lift release', 'effecting entry', 'evacuation', 'water provision', 'advice only', 'standby' and 'services not required'.
(p) Provisional data

There are consistently more casualties and rescues from SSIs than from fires. The majority of SSI fatalities occurred in medical incidents, whilst the greatest number of non-fatal casualties occurred in RTCs.

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



(p) Provisional data

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

	2012-13	2013-14	2014-15	2015-16	2016-17(p)
Fatalities	179	194	208	273	515
of which were rescued	*41*	*44*	*47*	*47*	*45*
Non-fatal Casualties	3,174	3,334	3,224	3,385	3,641
of which were rescued	*1,013*	*944*	*923*	*991*	*1,033*
Rescued (Uninjured)	1,025	918	960	1,120	1,610

(p) Provisional data.

In 2016-17 around 3 in 10 non-fatal casualties in SSIs were rescued, similar to the proportion seen earlier in the time series.

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 17, table 17, chart 18 and chart 19 refer to numbers of fires. In these charts and tables, the following hierarchy has been applied to the smoke alarm operation:

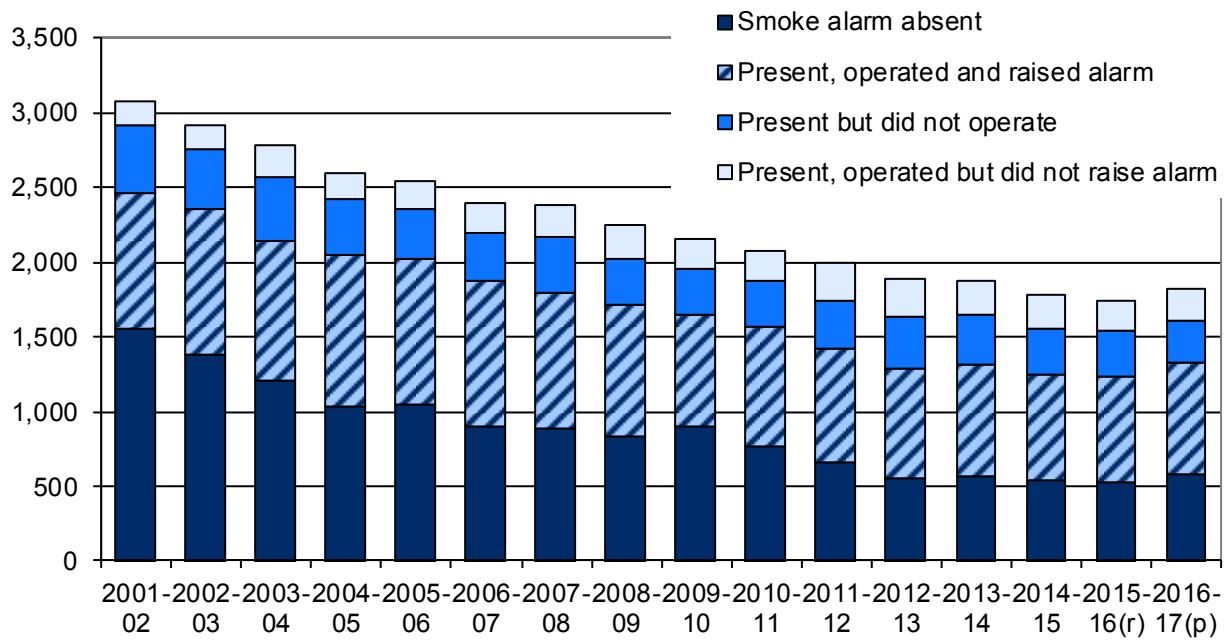
1. Present, operated and raised the alarm

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

A smoke alarm was present and operated correctly in around half of fires in dwellings occurring in 2016-17 (similar to previous years). In a further 15 per cent of cases a smoke alarm was present but failed to operate, whilst in 32 per cent of dwelling fires a smoke alarm was absent. In 2 per cent 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 62 per cent; the proportion with no smoke alarm has fallen by 18 percentage points. In only 13 per cent of dwelling fires in North Wales a smoke alarm was absent; respective percentages are higher for Mid and West Wales and South Wales (36 per cent and 39 per cent).

Table 17 shows that the number of dwellings fires where a smoke alarm was absent increased by 10 per cent to 588 in 2016-17 compared with 534 in 2015-16.

In 2016-17, all three FRAs saw increases in the number of dwelling fires where smoke alarms were absent (compared with the previous year).

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**
2007-08	126	273	489	**887**
2008-09	143	234	458	**836**
2009-10	121	279	509	**909**
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(r)	51	208	275	**534**
2016-17(p)	62	227	299	**588**
Percentage change 2015-16 to 2016-17	22	9	9	10

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

For context, approximately 94 per cent of all households in Wales had at least one smoke alarm (National Survey for Wales 2013-14[15]) and of these 98 per cent had at least one working smoke alarm. For each FRA the proportions of households with at least one smoke alarm and of these at least one working smoke alarm were as follows: North Wales (96 per cent and 98 per cent), Mid and West Wales (94 per cent and 98 per cent) and South Wales (94 per cent and 97 per cent).

Since 2009-10, 31 of the 105 accidental dwelling fire fatalities occurred in fires where a smoke alarm was known to be absent. 28 fatalities have occurred in accidental dwelling fires where a smoke alarm was present and raised the alarm.

The table below 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.

[15] National Survey for Wales – Smoke Alarms

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

	2012-13	2013-14	2014-15	2015-16(r)	2016-17(p)
Dwellings (a)					
Alarm was raised before system operated	153	148	140	132	129
No person in earshot	54	36	40	27	36
Occupants did not respond	27	28	31	31	31
No other person responded	1	2	2	1	4
Other	10	10	5	9	8
Unknown	4	3	2	2	3
All dwellings	**249**	**227**	**220**	**202**	**211**
Other buildings					
Alarm was raised before system operated	52	53	57	50	40
No person in earshot	10	6	8	5	7
Occupants did not respond	0	0	0	0	1
No other person responded	1	0	1	0	0
Other	3	1	4	6	1
Unknown	0	2	1	2	3
All other buildings	**66**	**62**	**71**	**63**	**52**

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

In 2016-17 there were almost 170 smoke alarms which activated but did not raise the alarm due to the alarm having already been raised. This equates to almost two thirds 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 in the available time series (since 2009-10).

In 2016-17, of the smoke alarms which did not raise the alarm 16 per cent were due to no one being in earshot, and a further 12 per cent were due to occupants not responding.

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

In 2016-17 the main reason for smoke alarm failures, in both dwellings and other buildings, was that the fire was not close enough to the detector (50 per cent of the smoke alarms which failed to activate in building fires). Defective or missing batteries accounted for almost 10 per cent of alarm failures in building fires in 2016-17.

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

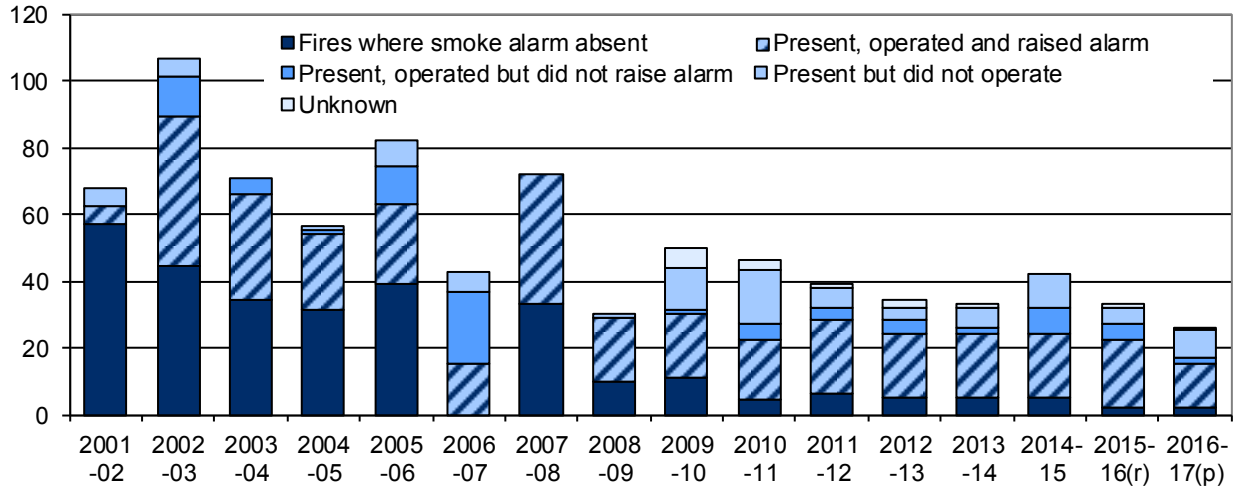
	2012-13	2013-14	2014-15	2015-16(r)	2016-17(p)
Dwellings (a)					
Fire not close enough to detector	179	170	153	166	149
Fire in area not covered by system	39	40	30	30	35
Alarm battery missing/defective	45	41	44	40	36
Fault in system	19	8	12	11	8
Detector removed	15	12	7	10	5
Alerted by other means	22	19	22	12	15
Other (b)	31	38	30	28	28
Unknown	10	14	9	5	11
All	**360**	**342**	**307**	**302**	**287**
Other buildings					
Fire not close enough to detector	59	56	64	46	47
Fire in area not covered by system	10	9	20	19	14
Alarm battery missing/defective	0	0	4	3	1
Fault in system	4	2	3	4	2
Detector removed	0	1	0	0	0
Alerted by other means	20	18	22	17	13
Other (b)	20	18	18	17	17
Unknown	5	5	2	14	11
All	**118**	**109**	**133**	**120**	**105**

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

Smoke alarms in fires at schools

Of the 26 fires occurring in schools in 2016-17 a smoke alarm was present and operated correctly in 58 per cent of incidents, whilst in a further 31 per cent 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

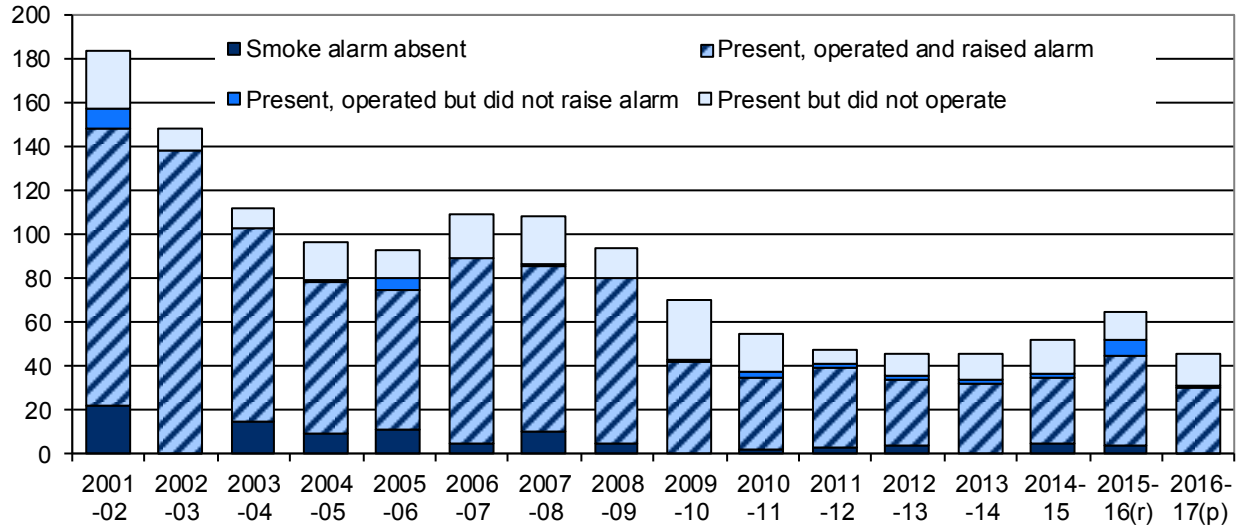


(r) Revised data.
(p) Provisional data.

Smoke alarms in fires at hospitals

In 2016-17 there were 47 fires in hospitals, 19 fewer than in the previous year and a fall of 74 per cent compared with the number in 2001-02. A smoke alarm was present and operated correctly in 64 per cent of fires in hospitals in 2016-17. In almost a third of hospital fires a smoke alarm was present but failed to operate; there was 1 fire where 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,)
(r) Revised data.
(p) Provisional data.

35 of the 47 hospital fires occurring in 2016-17 were accidental.

Since 2009-10 there have been no fatalities and 6 non-fatal casualties in hospital fires.

Further data is available on this topic on StatsWales.

Cause of fires

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

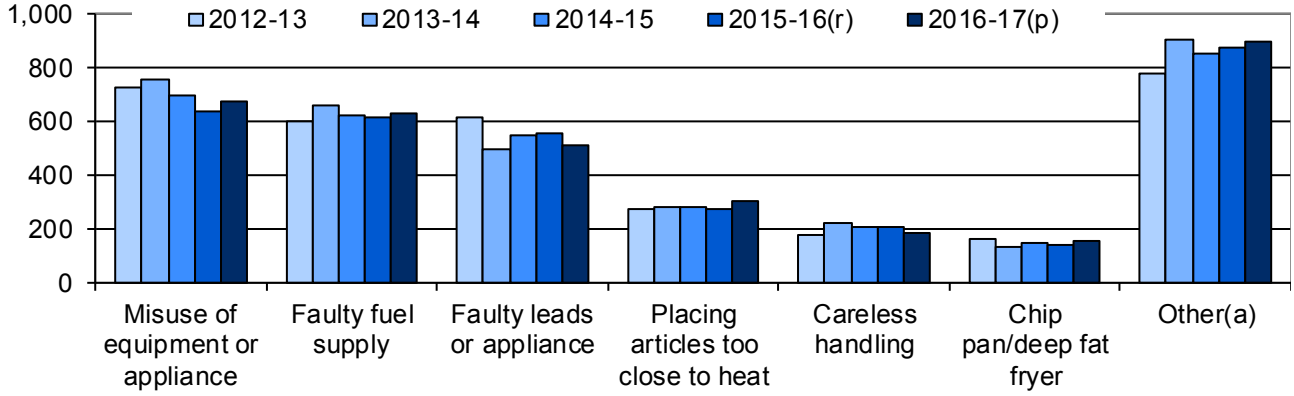
The **source of ignition** is the source of the flame, spark or heat that started the fire.

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

Cause of accidental primary fires

In 2016-17 the largest single cause of accidental fires was misuse of equipment or appliances, accounting for 20 per cent. Faulty fuel supplies caused slightly fewer accidental fires (19 per cent) whilst faulty leads or appliances were responsible for 15 per cent. 'Other accidental' accounted for 27 per cent 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

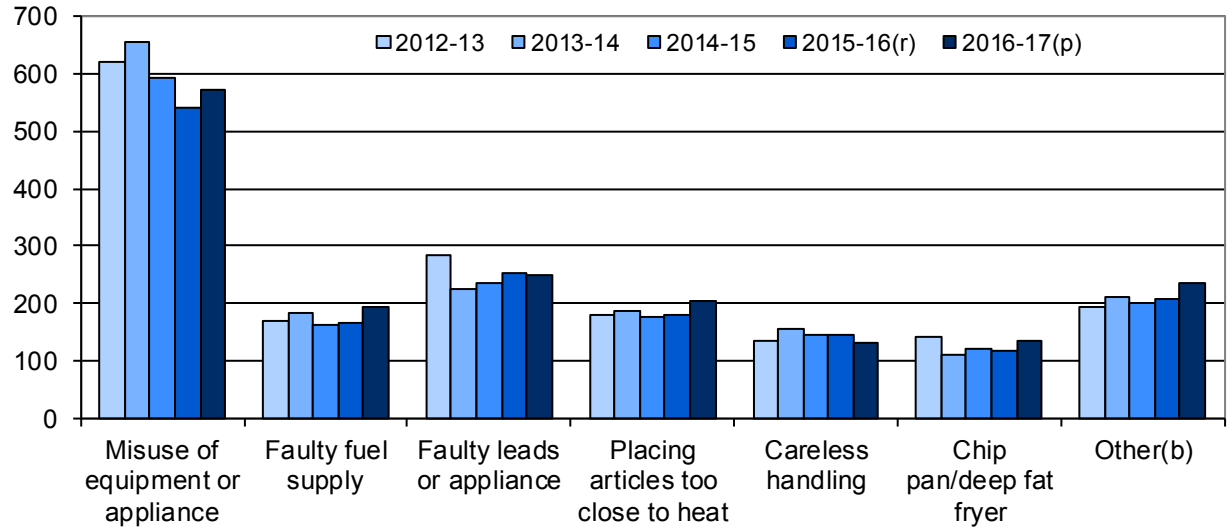
Table 20: Number of accidental primary fires by cause

	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)	Unspecified
2007-08	984	982	790	282	267	194	711	62
2008-09	910	839	766	299	228	208	553	90
2009-10	838	741	636	310	215	235	921	18
2010-11	801	726	565	324	273	177	1,051	13
2011-12	828	629	551	300	201	169	942	16
2012-13	729	603	613	271	178	164	782	0
2013-14	755	660	499	281	217	130	903	0
2014-15	699	622	546	281	202	145	852	0
2015-16(r)	640	617	558	271	204	142	876	0
2016-17(p)	678	630	514	301	181	157	902	0

(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

The misuse of equipment or appliances was also the main cause of accidental fires in dwellings, with 572 cases recorded in 2016-17. This equates to one third of accidental dwelling fires in 2016-17 and an increase of 6 per cent compared with 2015-16. Accidental dwelling fires caused by faulty leads or appliances decreased by 2 per cent in 2016-17, whereas those due to faulty fuel supply rose by 17 per cent.

Chart 30: Numbers 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'.
(r) Revised data.
(p) Provisional data.

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

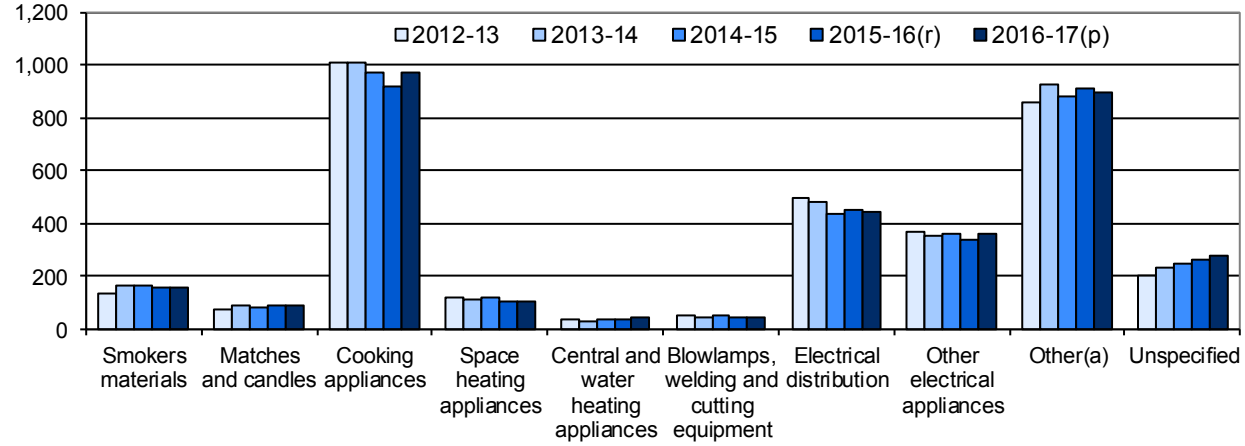
	Misuse of equipment or appliance	Faulty fuel supply	Faulty leads or appliance	Placing articles too close to heat	Careless handling	Chip pan /deep fat fryer	Other(b)	Unspecified
2007-08	752	141	333	206	179	190	223	12
2008-09	733	98	299	196	146	192	243	12
2009-10	679	165	261	187	149	209	212	2
2010-11	653	188	227	185	177	156	239	1
2011-12	704	159	227	190	139	147	220	3
2012-13	623	170	285	181	133	140	193	0
2013-14	657	184	226	188	155	110	212	0
2014-15	593	163	237	175	145	121	201	0
2015-16(r)	540	165	253	179	145	118	209	0
2016-17(p)	572	193	248	205	131	133	237	0

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

Source of ignition in accidental primary fires

Cooking appliances have consistently been recorded as the main cause of accidental fires. In 2016-17 there were 972 cases equating to 29 per cent of accidental fires, a similar (between 28 and 31 per cent) proportion to that seen in earlier years. The number of fires caused by cooking appliances rose by 6 per cent in 2016-17, however since 2001-02 the number has fallen by 47 per cent.

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 2016-17 there were 6 fatalities and 57 non-fatal casualties in accidental fires which were attributable to smokers' materials, more than the previous year (5 and 35 respectively); the number of smoking related fires decreased slightly. Since 2009-10 37 per cent of all fatalities were the result of accidental fires caused by smokers' materials.

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

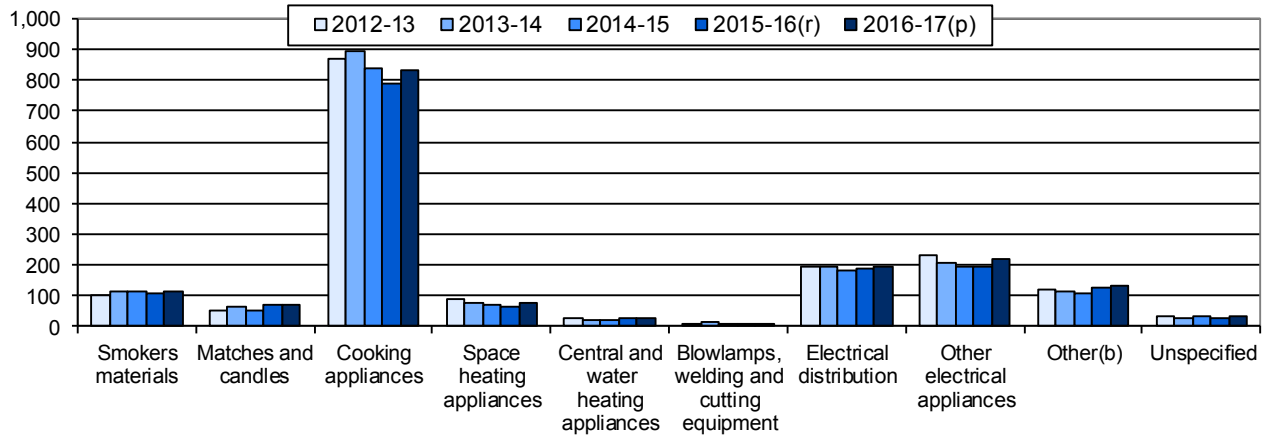
	Smokers materials	Matches and candles	Cooking appliances	Space heating appliances	Central and water heating appliances	Blow lamps, welding and cutting equipment	Electrical distribution	Other electrical appliances	Other (a)	Unspecified
2007-08	261	74	1,314	119	76	52	300	577	1,353	146
2008-09	208	104	1,250	143	65	77	331	470	1,132	112
2009-10	188	80	1,194	156	37	44	499	453	1,038	225
2010-11	242	121	1,096	146	38	55	462	466	1,068	236
2011-12	157	102	1,129	114	24	39	461	366	1,022	222
2012-13	134	71	1,009	120	32	49	493	369	861	202
2013-14	164	87	1,012	114	28	44	483	354	926	233
2014-15	163	80	969	117	38	50	437	361	884	248
2015-16(r)	158	91	917	104	35	40	448	339	912	264
2016-17(p)	155	86	972	105	40	39	439	358	895	274

(a) 'Other' includes 'Bombs and explosives', 'Chimney', 'Electric lighting', '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 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 almost half (48 per cent) of accidental dwelling fires in 2016-17. The number of these fires has fallen by 44 per cent since 2001-02 but did rise by 5 per cent compared with the previous year. Fires ignited by cooking appliances have also been responsible for 47 per cent of non-fatal casualties in accidental dwelling fires since 2009-10. 'Other electrical appliances' accounted for 13 per cent of accidental dwelling fires, a similar proportion as seen in previous years.

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.
(r) Revised data.
(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	Blow lamps, welding and cutting equipment	Electrical distribution	Other electrical appliances	Other (b)	Unspecified
2007-08	181	56	1,085	92	55	26	186	249	75	29
2008-09	129	88	1,068	96	54	7	191	186	86	15
2009-10	126	47	1,000	105	25	12	147	255	118	29
2010-11	147	64	928	89	23	5	154	278	115	23
2011-12	103	63	975	81	18	8	181	204	127	29
2012-13	100	53	872	88	27	11	194	230	118	32
2013-14	117	63	892	80	22	14	195	207	117	25
2014-15	116	55	840	73	24	5	182	197	110	33
2015-16(r)	109	69	789	68	28	5	191	196	124	30
2016-17(p)	114	69	830	77	29	11	196	222	136	35

(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', 'Vehicles related' 'Wet hay' and other electrical appliances where the power source is not recorded as electrical.
(r) Revised data.
(p) Provisional data.

Around 18 per cent of accidental fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. 42 per cent of accidental fires caused by faulty fuel supply were ignited in electrical distribution.

Table 24: Number of accidental primary fires by cause and source of ignition 2016-17(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	0	0	3	13	114	0	25	155
Matches and candles	15	1	0	39	11	0	20	86
Cooking appliances	607	20	36	93	21	155	40	972
Space heating appliances	9	11	17	41	3	0	24	105
Central and water heating appliances	2	11	23	1	0	0	3	40
Blowlamps, welding and cutting	11	3	1	16	0	0	8	39
Electrical distribution	6	265	91	2	1	1	73	439
Other electrical appliances	8	60	211	21	2	0	56	358
Other	16	246	122	66	26	1	418	895
Unspecified	4	13	10	9	3	0	235	274
Total	678	630	514	301	181	157	902	3,363

(p) Provisional data.

In 2016-17, around 3 in 10 accidental dwelling fires were caused by the misuse of equipment or appliances resulting in cooking appliances igniting. In 2016-17, faulty leads accounted for almost two thirds of accidental other electrical appliance fires in dwellings.

Table 25: Number of accidental dwelling(a) fires by cause and source of ignition 2016-17(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	0	0	2	8	87	0	17	114
Matches and candles	13	1	0	35	9	0	11	69
Cooking appliances	530	15	30	80	15	132	28	830
Space heating appliances	7	7	11	29	2	0	21	77
Central and water heating appliances	2	9	16	0	0	0	2	29
Blowlamps, welding and cutting	3	0	0	7	0	0	1	11
Electrical distribution	5	130	36	2	1	1	21	196
Other electrical appliances	6	24	143	16	1	0	32	222
Other	3	5	9	27	15	0	77	136
Unspecified	3	2	1	1	1	0	27	35
Total	572	193	248	205	131	133	237	1,719

(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.

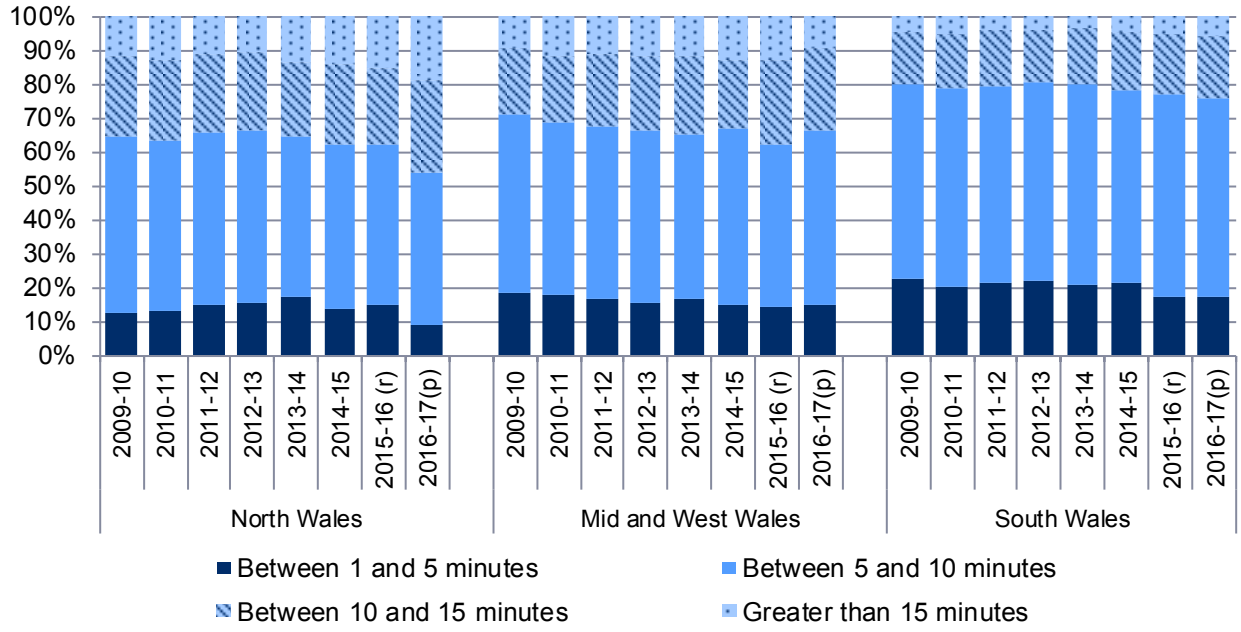
In 2016-17 54 per cent of primary fires attended in North Wales had a response time of between 1 and 10 minutes. Two thirds of primary fires in Mid and West Wales and three quarters in South Wales were attended within 10 minutes.

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
2014-15				
North Wales	14	48	24	14
Mid and West Wales	15	52	20	13
South Wales	22	56	17	5
Wales	**18**	**53**	**20**	**10**
2015-16(r)				
North Wales	15	47	22	16
Mid and West Wales	14	48	25	13
South Wales	18	59	18	5
Wales	**16**	**53**	**21**	**10**
2016-17(p)				
North Wales	9	45	27	19
Mid and West Wales	15	51	25	9
South Wales	18	58	18	6
Wales	**15**	**53**	**22**	**10**

(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 per cent of primary fires in were excluded in each year due to the response time being less than 1 minute or over 1 hour.
(r) Revised data.
(p) Provisional data.

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



(p) Provisional data.

In 2016-17 around 6 in 10 primary dwelling fires attended in North Wales had a response time of between 1 and 10 minutes; in Mid and West Wales almost 7 in 10 were attended in this time. 84 per cent of primary dwelling fires in South Wales were attended within 10 minutes.

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)				
2014-15				
North Wales	18	50	20	12
Mid and West Wales	17	56	17	11
South Wales	26	59	13	2
Wales	**21**	**56**	**16**	**8**
2015-16(r)				
North Wales	20	50	20	10
Mid and West Wales	18	56	20	7
South Wales	23	63	12	2
Wales	**21**	**58**	**17**	**5**
2016-17(p)				
North Wales	13	49	22	17
Mid and West Wales	16	56	23	6
South Wales	22	63	14	2
Wales	**18**	**57**	**19**	**6**

(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 per cent 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.
(r) Revised data.

Great Britain comparisons

At the time of publication 2016-17 data were not available for Scotland.

In 2016-17 the total number of fires attended saw no percentage change in England and fell in Wales by 11 per cent. Primary fires in both England and Wales in 2016-17 saw increases of 2 per cent compared with the previous year. Secondary fires decreased in England by 2 per cent and by 20 per cent in Wales.

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
2007-08	293.9	115.3	172.3	45.6	13.6	30.4	24.7	7.7	16.4
2008-09	249.2	104.3	136.7	40.6	13.2	25.7	19.5	7.0	11.7
2009-10	241.4	101.7	132.3	38.7	14.0	23.0	19.2	6.8	11.6
2010-11	228.4	92.3	128.4	39.0	13.2	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	154.4	74.7	72.5	26.7	11.1	14.3	11.4	4.7	5.9
2013-14	171.3	73.2	92.1	28.0	10.5	16.4	13.2	4.8	7.8
2014-15 (r)	155.0	71.1	78.7	25.0	10.6	13.4	11.7	4.6	6.5
2015-16 (p) (r)	162.0	73.4	84.5	26.6	11.0	14.7	12.1	4.7	7.0
2016-17 (p)	161.8	74.8	82.7	~	~	~	10.8	4.8	5.6

(a) English data are taken from Fire statistics data tables
(b) Scottish data for 2015-16 are currently 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 and non-fatal casualty rates per million population were lower in England than in Wales in 2016-17, and for most years in the time series shown England's rates are lower than both Scotland and Wales. Although 2016-17 data are not yet published for Scotland, for the years available Scotland has had the highest casualty and fatality rates.

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)
2007-08	358	7.0	10,319	201	72	13.9	1,719	332	28	9.3	632	210
2008-09	323	6.2	9,227	178	64	12.3	1,648	317	17	5.6	657	217
2009-10	336	6.4	8,865	170	62	11.9	1,214	232	23	7.6	575	189
2010-11	331	6.3	9,398	179	52	9.9	1,328	252	21	6.9	607	199
2011-12	314	5.9	9,375	176	59	11.1	1,416	267	23	7.5	592	193
2012-13	279	5.2	8,432	158	46	8.7	1,319	248	17	5.5	541	176
2013-14	274	5.1	7,817	145	31	5.8	1,311	246	17	5.5	626	203
2014-15(r)	263	4.8	7,588	140	41	7.7	1,101	206	20	6.5	543	176
2015-16(p)(r)	303	6.0	7,644	140	45	8.4	1,256	234	19	6.1	592	191
2016-17(p)	261	4.7	7,081	128	~	~	~	~	19	6.1	621	199

(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 for England and Wales.
(p) Provisional data.
~ Data not available yet.

Glossary

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

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

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

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

Deliberate fires include those where deliberate ignition is merely suspected.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(iii) First aid given at scene

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

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

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

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

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

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

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

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

(b) Major disasters;

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

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

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

Key quality information

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 over 800 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 900,000. There are 58 fire stations and over 1,300 employees.

South Wales Fire and Rescue Authority serves a population of over 1.5 million people covering 1,085 square miles. It employs over 1,700 staff including nearly 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 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 54.

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. 2016-17 data are currently marked as provisional and may be revised in future publications.

The table below compares the provisional 2015-16 data (extracted from IRS in June 2016) which was published in July 2016 with the revised data (extracted in July 2017) detailed in this bulletin. Some necessary revisions were made to the numbers of primary fires and false alarms due to a data quality exercise to remove deleted incidents which had erroneously appeared in the data set.

Comparison of provisional data with revised data (2015-16)

	Provisional 2015-16 (published July 2016)	Revised 2015-16 (published August 2017)	Percentage change
All Attendances	**26,609**	**26,600**	**0.0**
All fires	12,111	12,107	0.0
Primary Fires	4,681	4,677	-0.1
Secondary	6,998	6,998	0.0
False Alarms	14,498	14,493	0.0
Fatalities	19	19	0.0
Non Fatal Casualties	593	592	-0.2

Percentage changes for revised data

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
All Attendances	**1.2**	**0.2**	**0.1**	**0.1**	**0.0**	**0.0**
All fires	1.7	0.3	0.2	0.1	0.0	0.0
Primary Fires	2.1	0.6	0.3	0.1	0.0	-0.1
Secondary	1.6	0.1	0.0	0.1	0.0	0.0
False Alarms	0.5	0.0	0.0	0.1	0.0	0.0
Fatalities	5.0	21.1	0.0	0.0	-4.8	0.0
Non Fatal Casualties	4.7	1.9	0.7	0.2	0.0	-0.2

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 through the through the Due Out Soon part of the UK Government Statistics and research web pages and the Publication Hub. 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 July around 4 months after the year end.

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. An RSS feed alerts registered users to this 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 Fire Statistics publication.

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 2015-16 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.

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.

- 2015-16 data
- Pre 2014-15 data (published by the Scottish Government)

Limited Northern Ireland data are available 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 Official 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 Official 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.

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 indicators and associated technical information - How do you measure a nation's progress? - National Indicators

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 here.

Fire Statistics Data Quality Report

Incident Recording System Questions and Lists

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

Next update

Fire Statistics 2017-18 due to be published in July 2018

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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