ystadegau ar gyfer cymru statistics for wales

Statistical Bulletin

Llywodraeth Cymru Welsh Government

Deliberate fires 2021-22

30 Nov 2022
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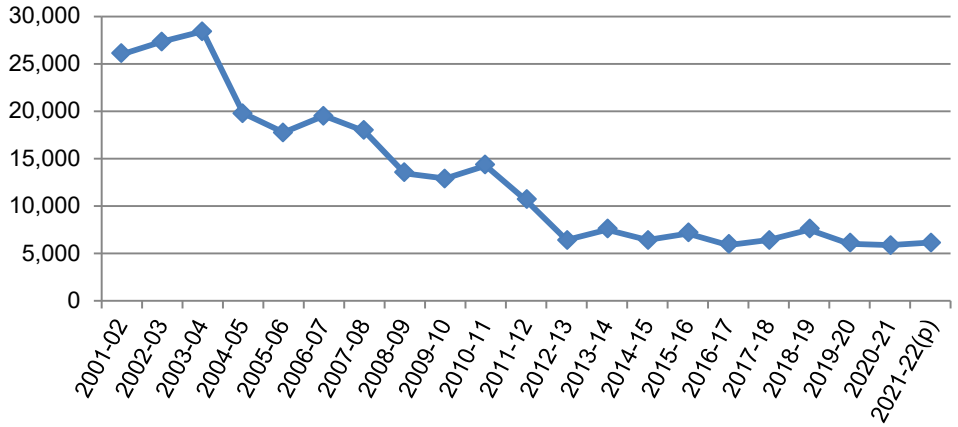
Deliberate fires are those ignited deliberately, or where deliberate ignition is suspected, or those recorded as 'doubtful' by the Fire and Rescue Authority (FRA). In 2021-22, almost 6 in 10 fires attended by the Welsh Fire and Rescue Authorities were deliberate.

The 2021-22 data are currently provisional, extracted from the Incident Recording System (IRS) in August 2022 and may be revised in subsequent publications.

Chart 1 Deliberate fires attended in Wales



The Welsh Fire and Rescue Authorities attended a total of 6,122 deliberate fires in 2021-22. This is an increase of 4% compared with the previous year but follows a year where numbers of fires were likely to be affected by the COVID-19 pandemic and the associated travel restrictions and lockdown measures. The number in 2021-22 is around a quarter of the number of fires in 2001-02.

Mid and West Wales FRA attended 1,682 deliberate fires in 2021-22.	↑	6% increase compared with 2020-21
North Wales FRA attended 472 deliberate fires in 2021-22.	↑	6% increase compared with 2020-21
South Wales FRA attended 3,968 deliberate fires in 2021-22.	↑	3% increase compared with 2020-21

About this bulletin

This biennial bulletin is complementary to data on fire incidents published in September 2022. It examines the impact and patterns in deliberate fires in Wales. The Welsh Government compiles these statistics from reports on all fires attended submitted by all Fire and Rescue Authorities (FRAs) in Wales to the Home Office.

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

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All deliberate fires

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.

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

Deliberate fires include those where deliberate ignition is merely suspected.

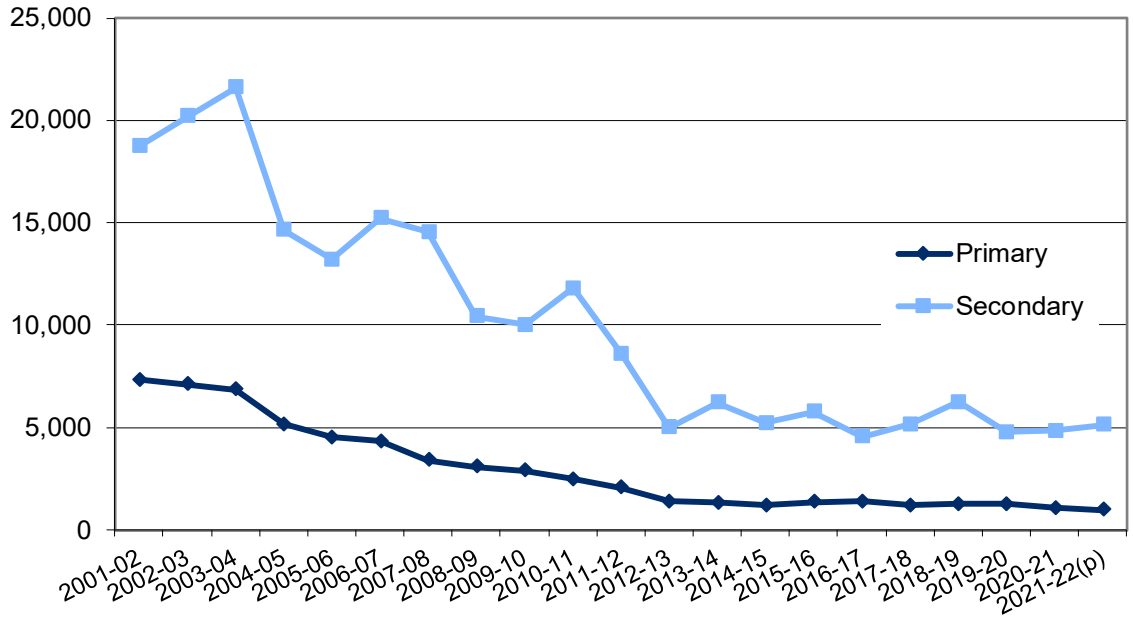
More detailed definitions are in the Glossary.

This section looks at the total number of deliberate fires attended by the Fire and Rescue Authority as recorded via the Incident Recording System (IRS).

Of the 10.740 fires Welsh Fire and Rescue Authorities (FRAs) attended in 2021-22, 6,122 (57%) were started deliberately. This is an increase of 4% from the 5,887 deliberate fires attended in 2020-21. This increase follows a year in which the number of deliberate fires is likely to have been affected by the COVID-19 pandemic and the travel restrictions and lockdown measures. Since 2001-02 the number of deliberate fires in Wales has fallen by 77%. The peak in the time series occurred in 2003-04 when there were 28,464 deliberate fires.

In 2021-22, 25% of primary fires and 84% of secondary fires were started deliberately.

Chart 2: Number of deliberate fires attended, by type



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

In 2021-22, there were 993 deliberate primary fires, a 6% fall compared with 2021-22 to the lowest figure in the time series. Generally, there has been a downward trend in the number of deliberate primary fires since 2001-02, decreasing 86% (chart 2).

Numbers of secondary fires are more prone to fluctuation, as can be seen from chart 2. The majority of these fires occur outdoors and as such may be affected by weather conditions among other factors. There were 5,127 deliberate secondary fires in 2021-22, an increase of 6% compared with 2020-21, and accounting for 48% of all (accidental and deliberate, primary, secondary and chimney) fires attended by the Fire and Rescue Authorities. Since 2001-02 there has been an overall reduction of 73% in deliberate secondary fires.

In 2021-22, 18% of all attendances (fires, fire false alarms and Special Service Incidents (SSIs)) were for deliberate fires, a similar proportion to that seen in recent years.

Table 1: Number of deliberate fires, by location

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (p)
Primary fires	**1,394**	**1,199**	**1,259**	**1,261**	**1,060**	**993**
Dwellings	139	132	125	130	126	120
Other buildings	266	256	218	268	203	202
Road vehicles	837	677	635	670	533	499
Other	152	134	281	193	198	172
Secondary fires	**4,540**	**5,174**	**6,262**	**4,792**	**4,827**	**5,127**
Derelict buildings	95	100	71	97	69	88
Derelict road vehicles	66	43	36	22	15	24
Other	4,379	5,031	6,155	4,673	4,743	5,015
All deliberate fires (a)	**5,935**	**6,374**	**7,523**	**6,054**	**5,887**	**6,122**

(a) Includes a small number of deliberate chimney fires.
(p) Provisional data.

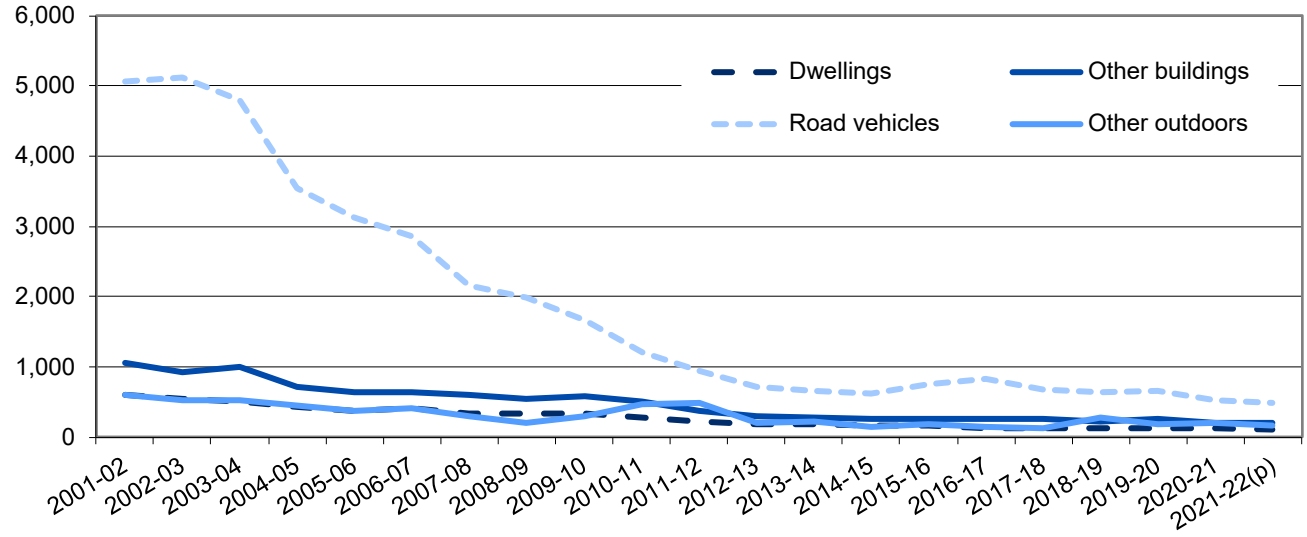
In 2021-22, 25% of primary fires were deliberate, 3 percentage points lower than in 2020-21. The smaller proportion is due to there being an increase in the number of accidental primary fires but a fall in the number of deliberate primary fires. Whilst only 8% of primary dwelling fires were deliberate, over half of outdoor primary fires, 41% of road vehicle fires and 25% of fires in 'other buildings'[1] were deliberate in 2021-22 (Table 2)

As in other years, in 2021-22, road vehicles accounted for the largest proportion of deliberate primary fires in Wales (50%). In 2021-22 the number of road vehicle fires decreased by 6% (compared with the previous year) to 499, the lowest number in the time series. The number of deliberate primary road vehicle fires in 2021-22 is around 10% of the figure in 2001-02, when there were over 5,000 such fires.

In 2021-22 the number of deliberate primary fires in dwellings fell by 5% compared with the previous year, although since numbers are small this equates to 6 fewer fires. There were 13% fewer in other locations (which include those occurring outdoors, in outdoor structures and in other transport vehicles), whilst numbers of deliberate primary fires in other buildings were steady.

[1] other residential or non-residential buildings; other (institutional) residential buildings include properties such as hostels/hotels/B&Bs, nursing/care homes, student halls of residence etc; non-residential buildings include properties such as offices, shops, factories, warehouses, restaurants, public buildings, religious buildings etc

Chart 3: Number of deliberate primary fires, by location



(p) Provisional data.

Table 2: Percentage of primary fires started deliberately, by location

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Building	15	15	14	16	15	13
Dwelling	7	8	8	8	8	8
Other residential	17	12	12	12	16	13
Non residential	31	30	26	33	29	26
Road vehicle	50	45	43	47	45	41
Other(a)	51	49	60	56	50	51
Outdoor	52	51	61	58	51	53
All primary fires	29	28	29	29	28	25

(a) Includes 'other transport vehicles'.

Over the years there have been a number of national programmes for dealing with deliberate fires. The Wales Arson Reduction Strategy (WARS) first reported in 2007, with a review in 2009, and updated strategies for 2012-15 and most recently 2019[2]. A delivery plan from the 2012-15 report (WARS III) resulted in a multi-agency taskforce 'Operation Dawns Glaw' being established in 2015 and aims to reduce the number of deliberate grassland fires. Analysis of grassland fire data can be found in Grassland Fires 2021-22 which was published in October 2022.

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

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

North Wales FRA - Arson Reduction

Mid and West Wales FRA - Reducing Arson

[2] Wales Arson Reduction Strategy

South Wales FRA - Fire setting Intervention scheme and Deliberate fires

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

In 2021-22, 33% of primary fires in South Wales, 20% in Mid and West Wales and 16% in North Wales were started deliberately. For secondary fires the proportion started deliberately was higher, 91% in South Wales, 74% in Mid and West Wales and 37% in North Wales.

South Wales FRA continues to attend the bulk of deliberate fires in Wales (two-thirds of all deliberate fires); Mid and West Wales attend just over a quarter of the deliberate fires in Wales, whilst around 1 in 13 were attended by North Wales FRA . Similar proportions are seen throughout the time series.

In 2021-22 all FRAs in Wales saw increases in deliberate fires compared with 2020-21; the largest increase being in North Wales (6%), and Mid and West Wales (also 6%). South Wales saw an increase of 3% in the number of deliberate fires.

All FRSs in Wales saw a decrease in deliberate primary fires, down 16% in North Wales, down 5% in South Wales and down 2% in Mid and West Wales. Conversely all FRSs saw increases in numbers of deliberate secondary fires, up 19% in North Wales, up 7% in Mid and West Wales and up 5% in South Wales.

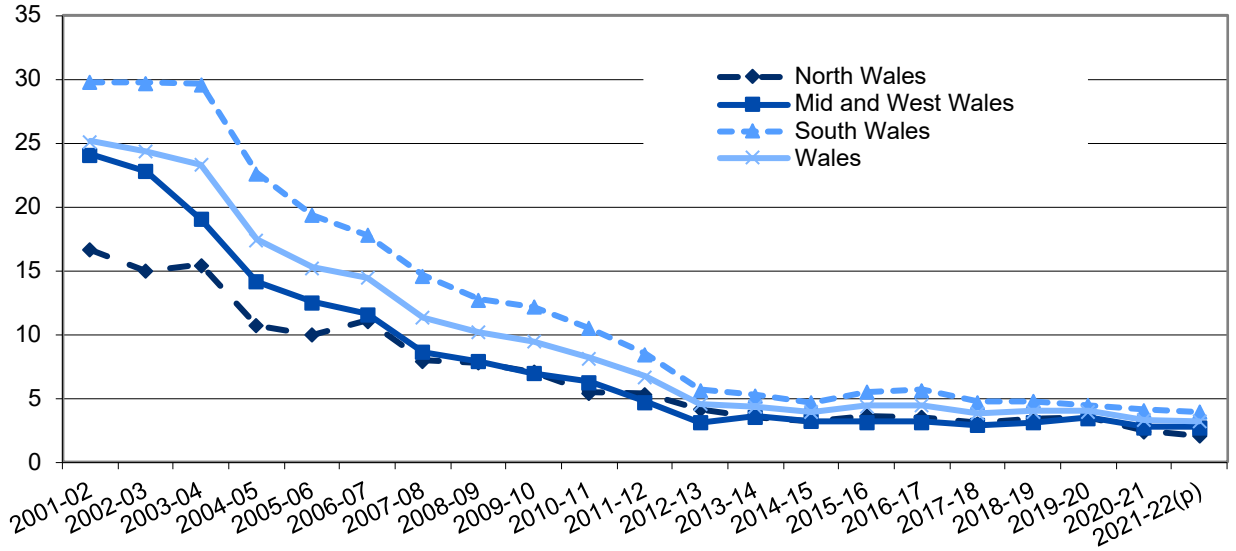
Table 3: Number and percentage of deliberate fires, by fire and rescue authority

	Primary fires				Secondary fires				All fires			
	North Wales	Mid and West Wales	South Wales	Wales	North Wales	Mid and West Wales	South Wales	Wales	North Wales	Mid and West Wales	South Wales	Wales
Number												
2017-18	215	262	722	1,199	435	1,257	3,482	5,174	650	1,520	4,204	6,374
2018-19	241	283	735	1,259	414	1,483	4,365	6,262	655	1,768	5,100	7,523
2019-20	248	319	694	1,261	405	1,273	3,114	4,792	653	1,593	3,808	6,054
2020-21	170	251	639	1,060	276	1,341	3,210	4,827	446	1,592	3,849	5,887
2021-22(p)	143	246	604	993	329	1,434	3,364	5,127	472	1,682	3,968	6,122
Percentage by region												
2017-18	18	22	60	100	8	24	67	100	10	24	66	100
2018-19	19	22	58	100	7	24	70	100	9	24	68	100
2019-20	20	25	55	100	8	27	65	100	11	26	63	100
2020-21	16	24	60	100	6	28	67	100	8	27	65	100
2021-22	14	25	61	100	6	28	66	100	8	27	65	100
Percentage in region which are deliberate												
2017-18	22	19	37	28	49	77	92	82	32	48	73	58
2018-19	25	20	37	29	35	68	90	77	29	47	74	58
2019-20	26	25	34	29	48	75	91	80	33	51	69	57
2020-21	21	22	35	28	34	75	89	78	25	52	70	57
2021-22	16	20	33	25	37	74	91	79	25	51	71	57

(p) Provisional data.

Charts 4 and 5 show rates of primary and secondary deliberate fires per 10,000 population. As with absolute numbers of fires, the highest rates are consistently in South Wales, although the gap has narrowed greatly since 2001-02. The difference between the highest and the lowest regional rates of primary fires has fallen from around 13 per 10,000 population in 2001-02, to approximately 2 per 10,000 population in 2021-22.

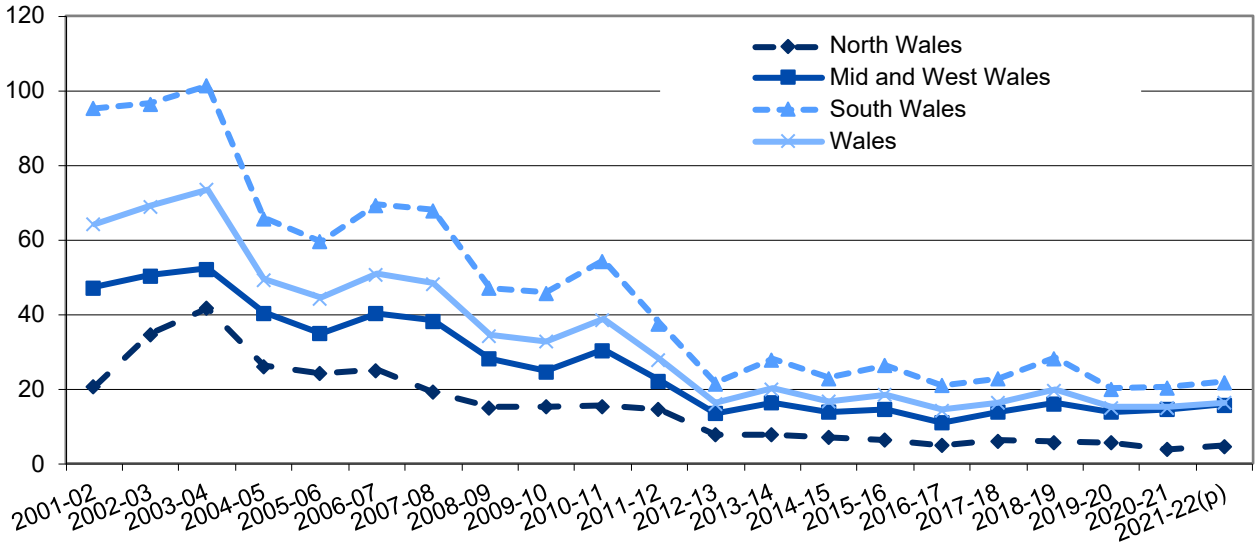
Chart 4: Rate of deliberate primary fires per 10,000 population (a)



(a) Population data are taken from ONS Mid Year Estimates and are revised periodically and so rates are subject to change between publications. 2021 population estimates have been taken from the Census.
(p) Provisional data.

Similarly in 2001-02 the difference between the highest rate of secondary fires and the lowest rate was around 75 fires per 10,000 population, in 2021-22 this figure has fallen to approximately 17 fires per 10,000 per population.

Chart 5: Rate of deliberate secondary fires per 10,000 population (a)

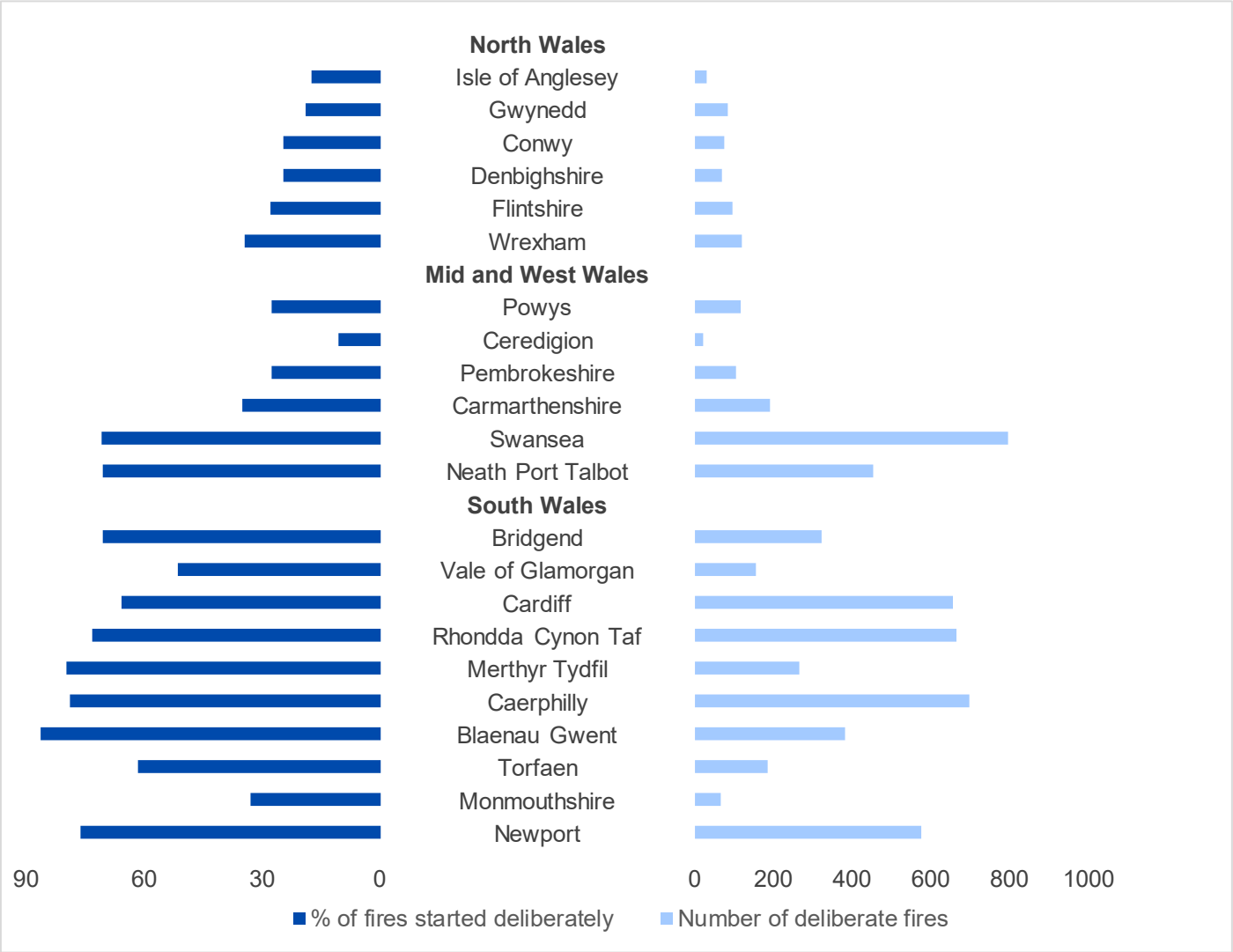


(a) Population data are taken from ONS Mid Year Estimates and are revised periodically and so rates are subject to change between publications. 2021 population estimates have been taken from the Census.
(p) Provisional data.

Chart 6 below shows the number of deliberate fires occurring in each local authority in 2021-22. It also shows the proportion of fires within each local authority which were started deliberately.

From the chart we can see four local authorities (Swansea, Caerphilly, Cardiff and Rhondda Cynon Taf) each had over 600 deliberate fires, accounting for, in total, 46% of all deliberate fires in Wales in 2021-22. Blaenau Gwent had the highest proportion (86%) of fires which were deliberately started. In six local authorities in South Wales and 2 in Mid and West Wales over 70% of fires were started deliberately. In North Wales, Wrexham had both the highest number and the highest proportion of deliberate fires (118 deliberate fires and 35% of fires started deliberately). Overall Ceredigion has both the fewest deliberate fires (only 20 deliberate fires) and the lowest proportion of fires started deliberately (11%).

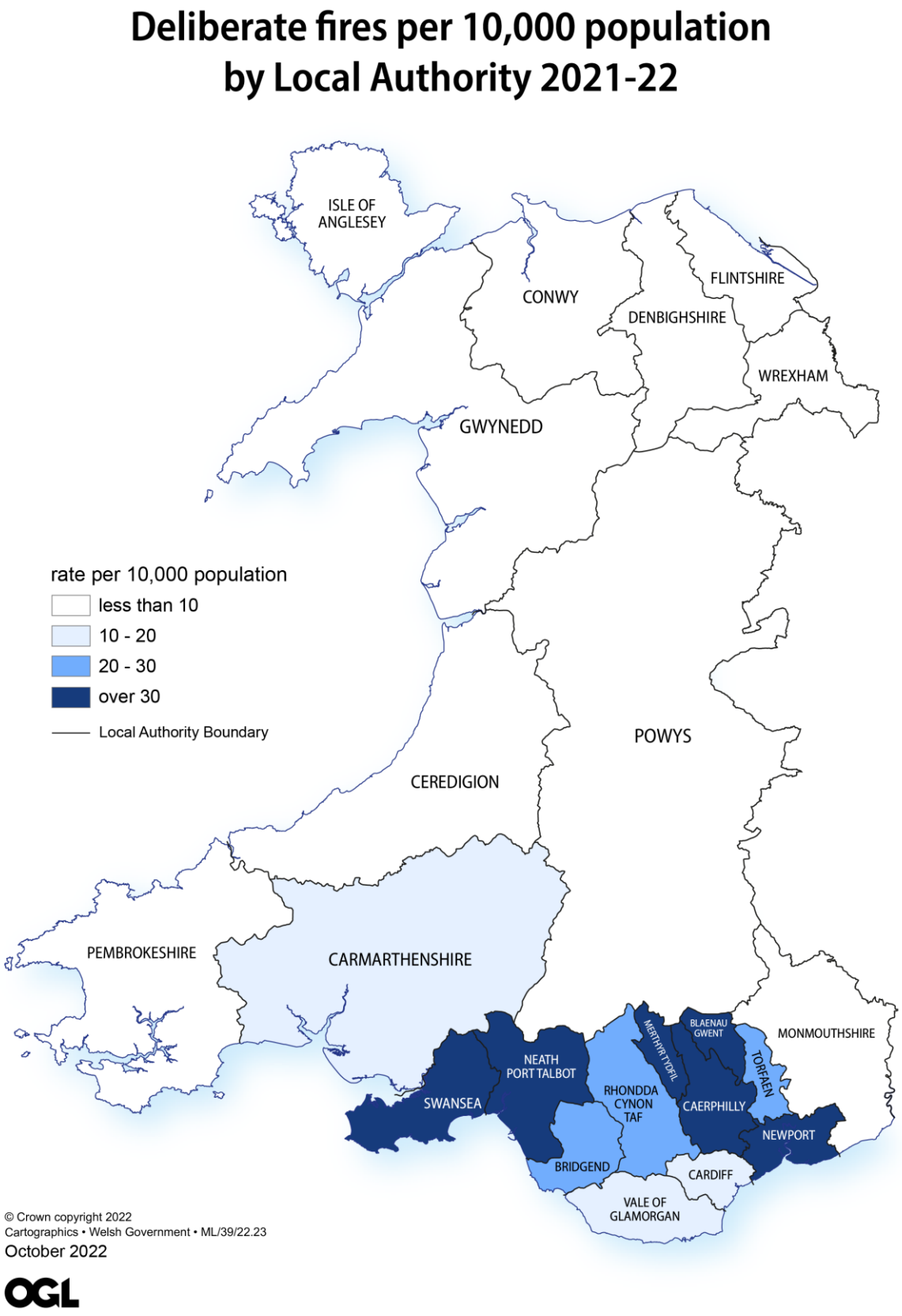
Chart 6: Percentage and number of deliberate fires by local authority, 2021-22(a)(p)



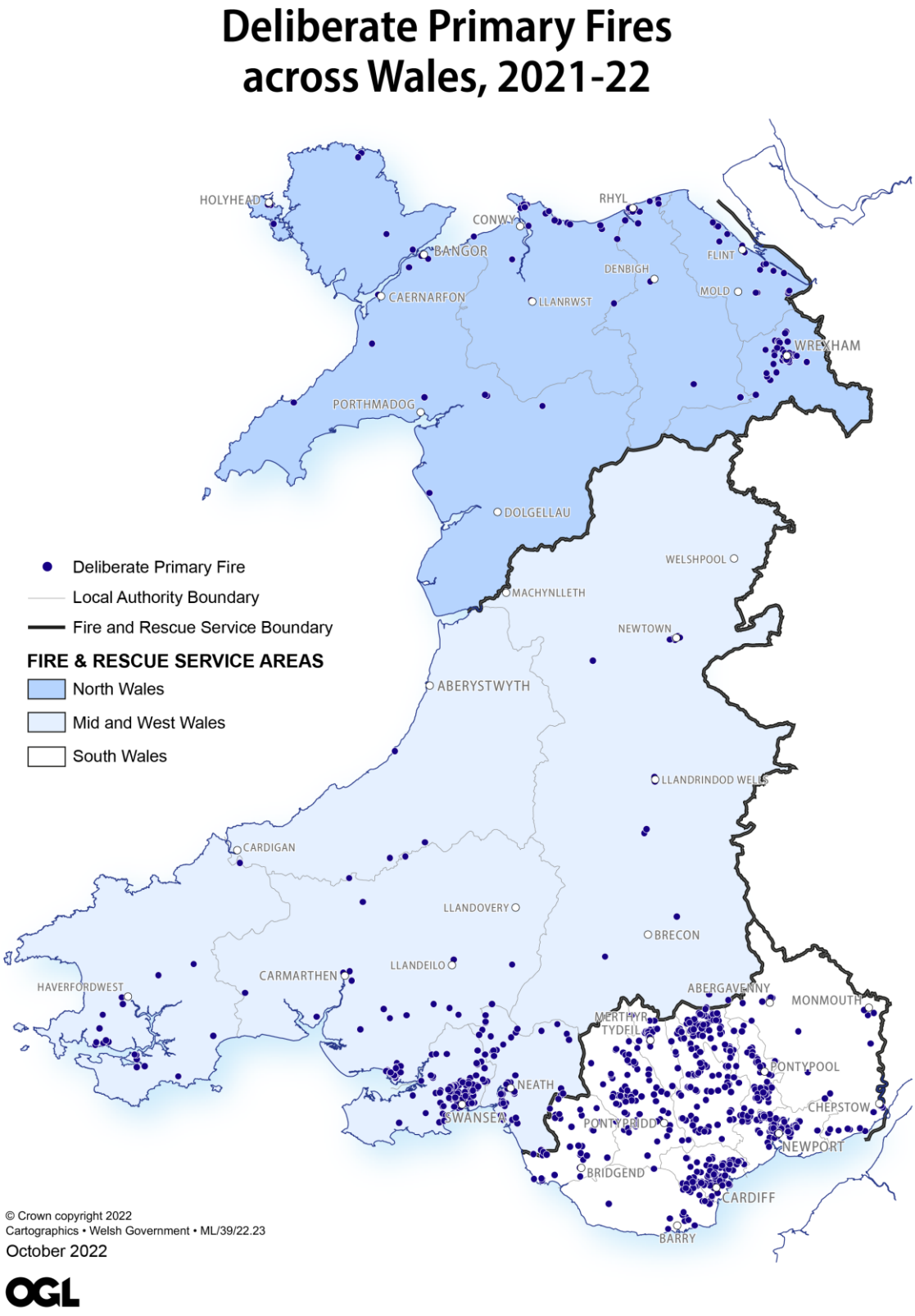
(a) Local authorities have been assigned to incidents based on the grid reference recorded by the Fire and Rescue Authority. See the Key Quality Information for further information.
(p) Provisional data

Wrexham had the highest proportion of deliberate fires occurring in buildings of all the local authorities, (31%). The Vale of Glamorgan had the lowest proportion, with only 2% of deliberate fires occurring in buildings.

The map below shows the rates (per 10,000 population) of deliberate fires in each Local Authority in Wales in 2021-22.

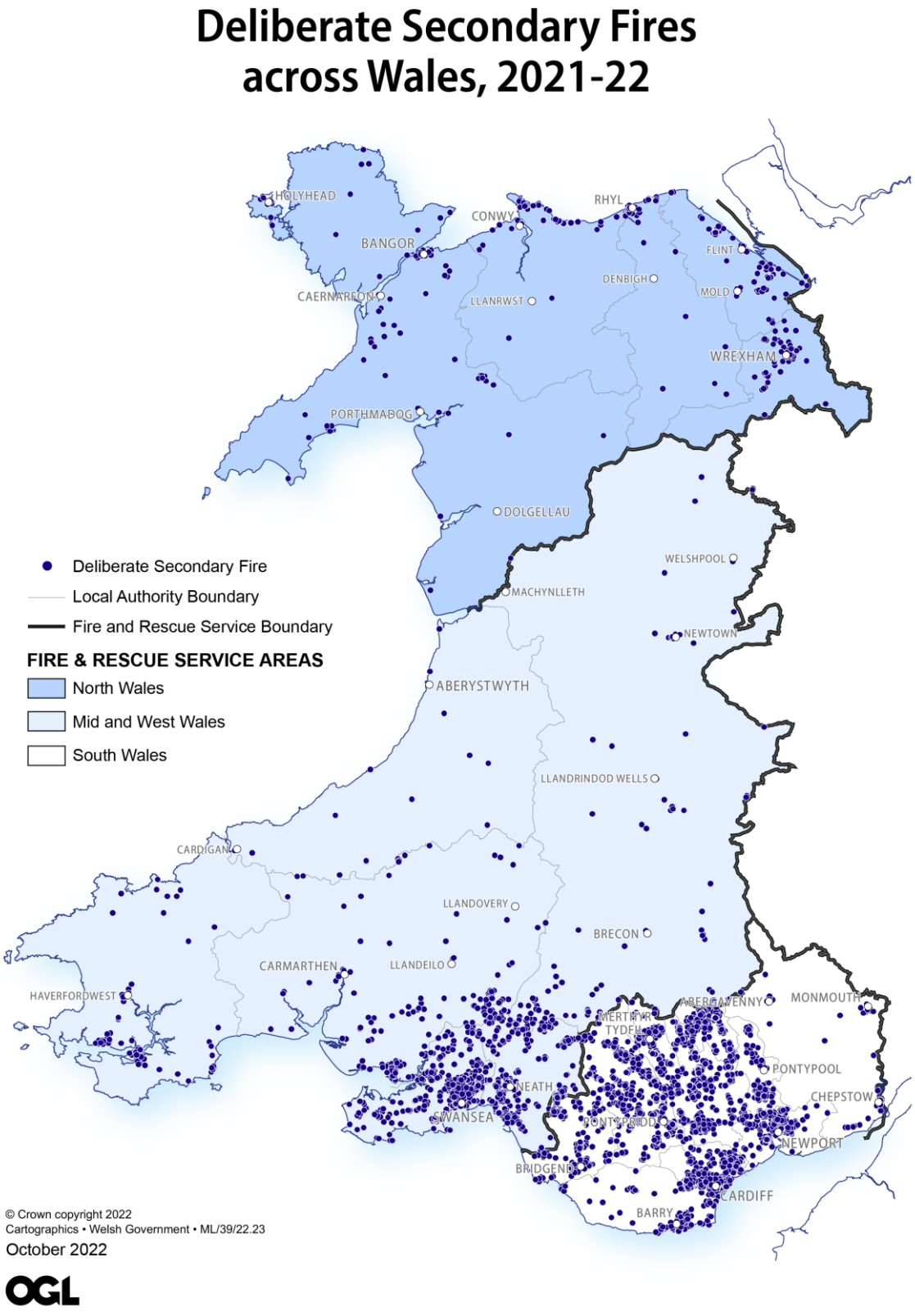


The map below shows the locations of deliberate primary fires in Wales in 2021-22. The map highlights the level of concentration of these fires in the South Wales area as a whole, but also in Wrexham within North Wales and in Swansea in Mid and West Wales.



Data mapped above are based on grid references; see the Key quality information for further details

The map below shows the locations of deliberate secondary fires in Wales in 2021-22. As with primary fires, the map shows the large number of clusters of these fires in the South Wales area, and also around Swansea and Neath in Mid and West Wales, and in the Wrexham area in North Wales.



Data mapped above are based on grid references; see the Key quality information for further details

Fires by month and time of day

Since 2010-11 in all but one year, April has been the month with the most deliberate fires each year; the exception was 2018-19 when 25% occurred in July. In 2021-22, April had 21% of the deliberate fires occurring in the year and saw 25% more deliberate fires than in April 2021. Numbers of deliberate fires in April have varied greatly throughout the time series with a high of 3,119 in 2010-11 and a low of 478 in 2018-19. March saw the second highest number in 2021-22 with 962 deliberate fires and 16% of the deliberate fires in 2021-22.

The months May, September and October all saw a decrease in the number of deliberate fires in 2021-22; the largest decrease was seen in May (down 55%).

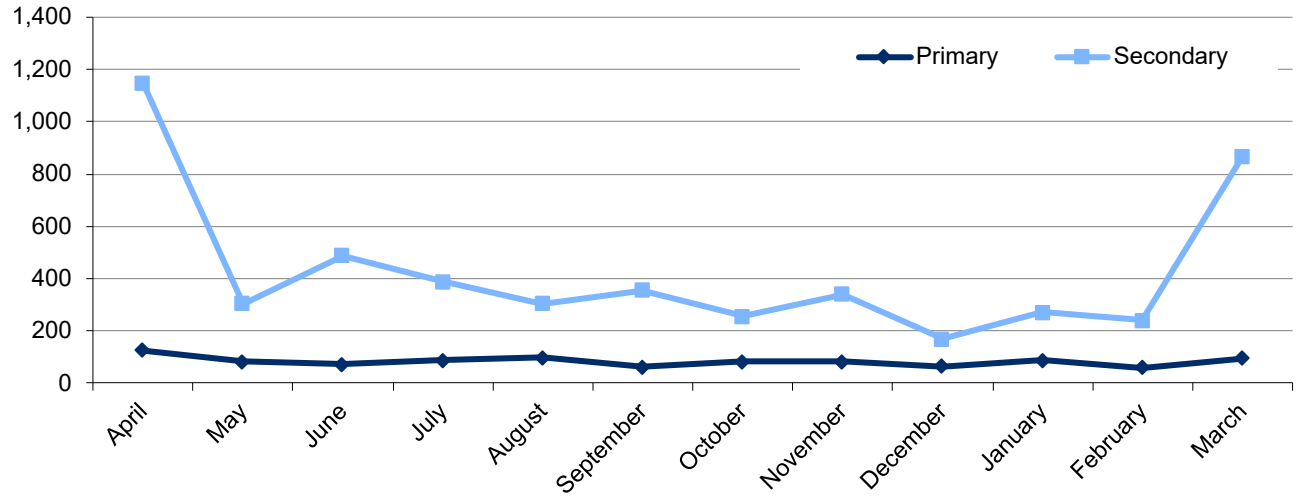
Table 4: Total deliberate fires, by month (a)

	Number					Percentage				
	2017-18	2018-19	2019-20(r)	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22
April	1,305	478	1,025	1,018	1,273	20	6	17	17	21
May	879	770	876	859	385	14	10	14	15	6
June	549	850	439	510	558	9	11	7	9	9
July	595	1,900	744	397	476	9	25	12	7	8
August	487	578	441	399	402	8	8	7	7	7
September	350	440	447	467	418	5	6	7	8	7
October	476	514	327	344	339	7	7	5	6	6
November	559	421	375	415	422	9	6	6	7	7
December	278	216	273	219	232	4	3	5	4	4
January	257	385	266	264	358	4	5	4	4	6
February	387	433	253	293	297	6	6	4	5	5
March	252	538	588	702	962	4	7	10	12	16
Total	6,374	7,523	6,054	5,887	6,122	100	100	100	100	100

(a) Includes deliberate chimney fires.
(r) Revised data.
(p) Provisional data.

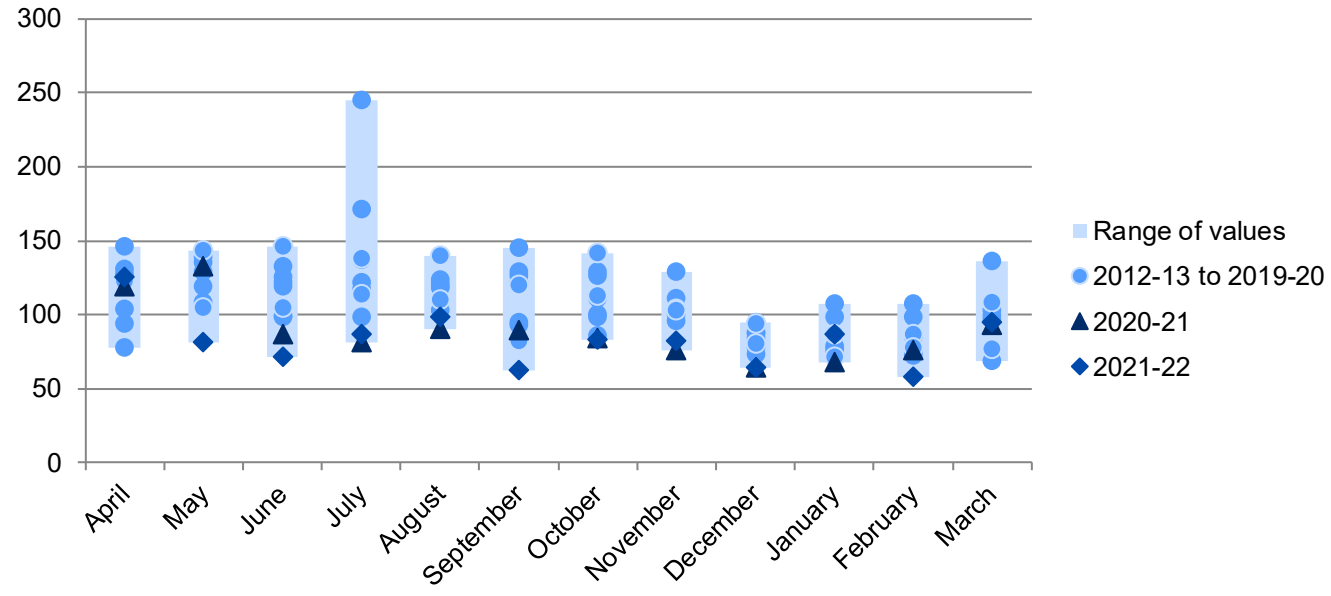
Chart 7 shows how the number of deliberate primary fires stays relatively static throughout the year, whereas the number of secondary fires varies, with the peak being in the spring months. Similar patterns are seen in earlier years.

Chart 7: Number of primary and secondary deliberate fires, by month, 2021-22 (p)



(p) Provisional data.

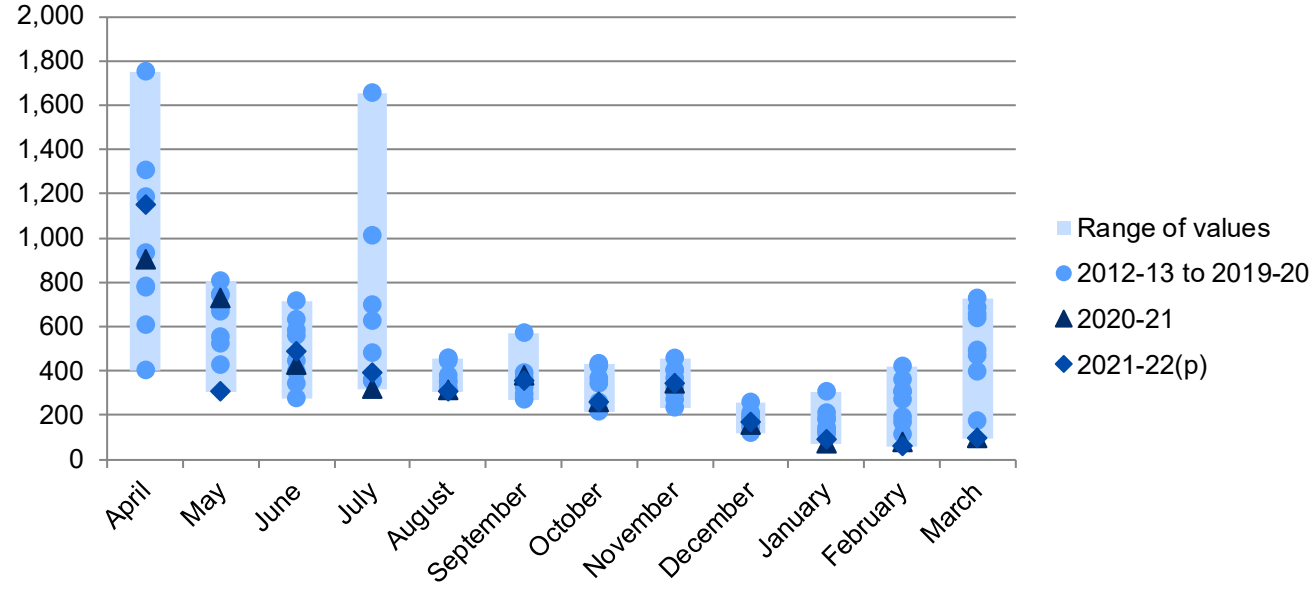
Chart 8: Number of deliberate primary fires, by month



(p) Provisional data.

Chart 8 shows 2021-22 and 2020-21 deliberate primary fires by month along with the range of values for each month for the years 2012-13 to 2021-22 inclusive. The chart indicates that throughout the year there's not a great deal of fluctuation, monthly numbers across the last 10 years vary from 58 up to 245, but only two months in this time period saw more than 150 fires (both of which were in July).

Chart 9: Number of deliberate secondary fires, by month



(p) Provisional data.

Chart 9 shows the respective picture for deliberate secondary fires and illustrates when the peaks are likely to occur within the year, but within these months the number of fires seen each year cover a far wider range. As with primary fires, numbers of deliberate secondary fires for 2021-22 and 2020-21 are at the lower end of the range, with the exception of April when numbers were mid-range and May 2021 which saw relatively high figures.

From table 5 we can see that deliberate secondary fires fluctuate a great deal throughout the year and in 2021-22 occurred mainly in April and March whilst numbers of deliberate primary fires stay relatively stable. For instance in 2021-22, percentages of deliberate primary fires for each month ranged from 6% to 13%, whereas for deliberate secondary fires, percentages for individual months ranged from 3% to 22%. Since the majority of secondary fires occur outdoors, they can be greatly influenced by the seasons and weather conditions.

In 2021-22 at least 70% of fires seen in any month were outdoors, the lowest proportion being in December (70%), whereas 92% of deliberate fires in April and 91% of those in March occurred outdoors.

Six months saw an increase in the number of deliberate primary fires in 2021-22. The largest rise occurred in January (up 28% compared with January 2021) while the largest decrease occurred in May (down 39% compared with May 2020).

8 months in 2021-22 saw an increase in deliberate secondary fires, the largest being in March (up 42% compared with March 2021). The largest decrease in secondary deliberate fires occurred in May (down 58% compared with May 2020).

Table 5: Number and percentage of deliberate primary and secondary fires, by month(a)

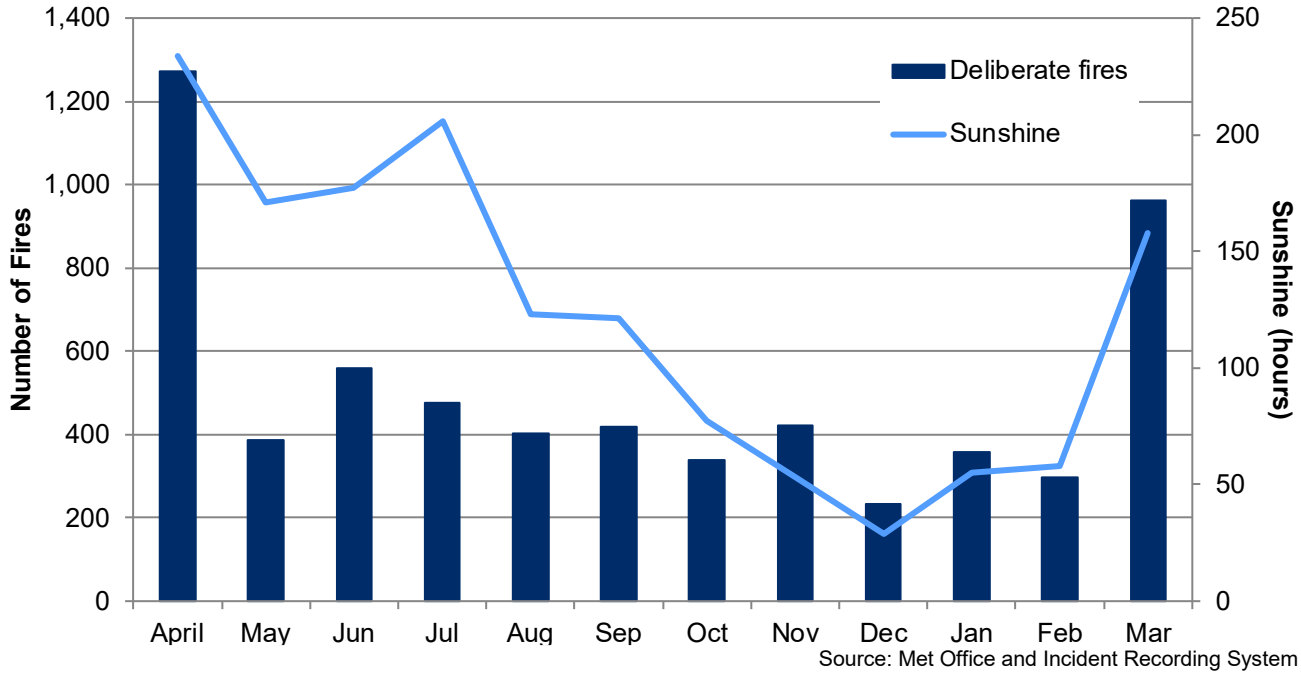
	Number					Percentage				
	2017-18	2018-19	2019-20(r)	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22
Primary										
April	123	78	94	119	125	10	6	7	11	13
May	143	106	129	133	81	12	8	10	13	8
June	105	133	99	87	71	9	11	8	8	7
July	114	245	122	81	87	10	19	10	8	9
August	110	124	118	90	98	9	10	9	8	10
September	82	95	126	89	62	7	8	10	8	6
October	113	86	111	84	83	9	7	9	8	8
November	103	96	105	76	82	9	8	8	7	8
December	80	73	88	64	64	7	6	7	6	6
January	71	79	87	68	87	6	6	7	6	9
February	78	75	85	76	58	7	6	7	7	6
March	77	69	97	93	95	6	5	8	9	10
All	**1,199**	**1,259**	**1,261**	**1,060**	**993**	**100**	**100**	**100**	**100**	**100**
Secondary										
April	1,182	400	931	899	1,148	23	6	19	19	22
May	736	664	747	726	304	14	11	16	15	6
June	444	717	340	423	487	9	11	7	9	9
July	481	1,655	622	316	389	9	26	13	7	8
August	377	453	323	309	304	7	7	7	6	6
September	268	345	321	378	356	5	6	7	8	7
October	363	428	216	260	256	7	7	5	5	5
November	456	325	270	339	340	9	5	6	7	7
December	198	143	184	155	168	4	2	4	3	3
January	186	306	179	196	271	4	5	4	4	5
February	308	357	168	217	239	6	6	4	4	5
March	175	469	491	609	865	3	7	10	13	17
All	**5,174**	**6,262**	**4,792**	**4,827**	**5,127**	**100**	**100**	**100**	**100**	**100**

(a) Deliberate primary and secondary fires in the table above may not add to the total of deliberate fires shown elsewhere, this is due to the exclusion of the small number of deliberate chimney fires from this table.
(r) Revised data.
(p) Provisional data.

As seen in charts 10 and 11, data from the Met Office shows that, April saw the most hours of sunshine, the least amount of rainfall, and the highest number of fires in 2021-22. Levels of sunshine were low in December, which was also the 4th wettest month and saw the fewest deliberate fires. However, weather data cannot explain all fluctuations, for instance June and July saw comparatively high levels of sunshine and low levels of rainfall but far fewer fires than the peak months for the year.

Weather data are available from the Met Office

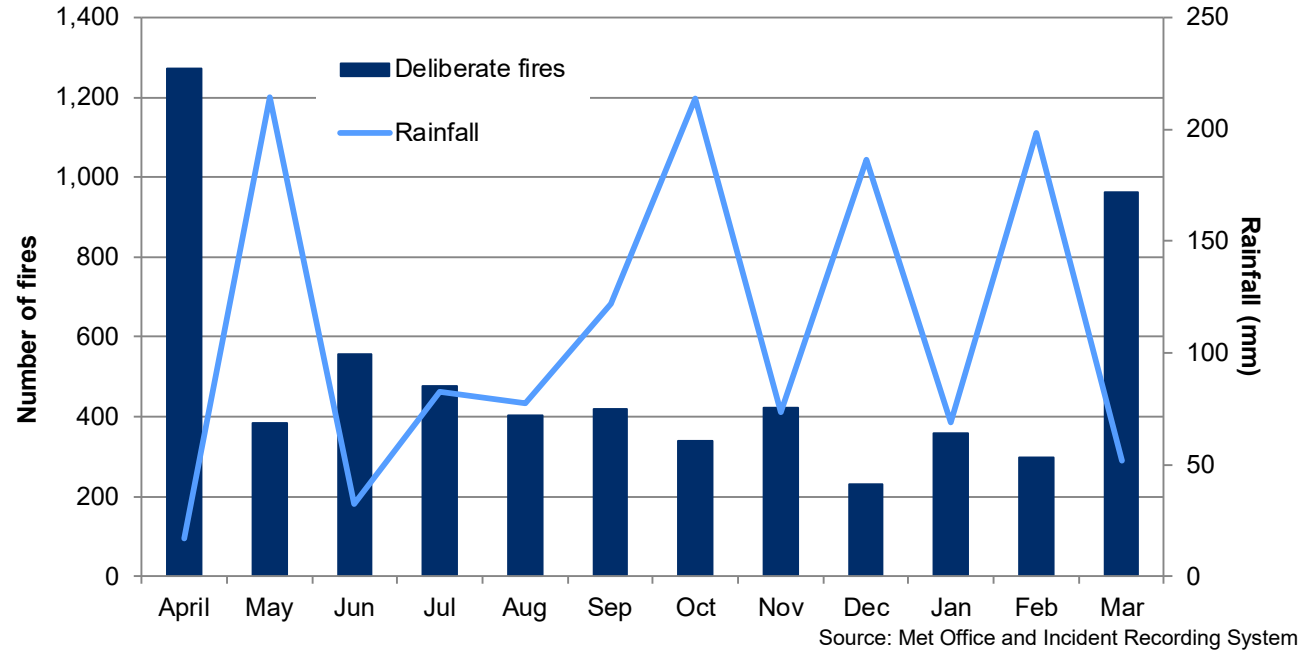
Chart 10: Total deliberate fires and total hours of sunshine, by month, 2021-22 (p)



Source: Met Office and Incident Recording System

(p) Provisional data.

Chart 11: Total deliberate fires and total rainfall, by month, 2021-22 (p)



Source: Met Office and Incident Recording System

(p) Provisional data.

In 2021-22 (as in previous years) the largest proportion of deliberate primary and secondary fires occurred between 6pm and midnight, with 44% of primary fires and 57% of secondary fires. Just over a fifth of primary fires took place between midnight and 5.59 a.m., whilst around 3 in 10 secondary fires took place between midday and 5.59 p.m.

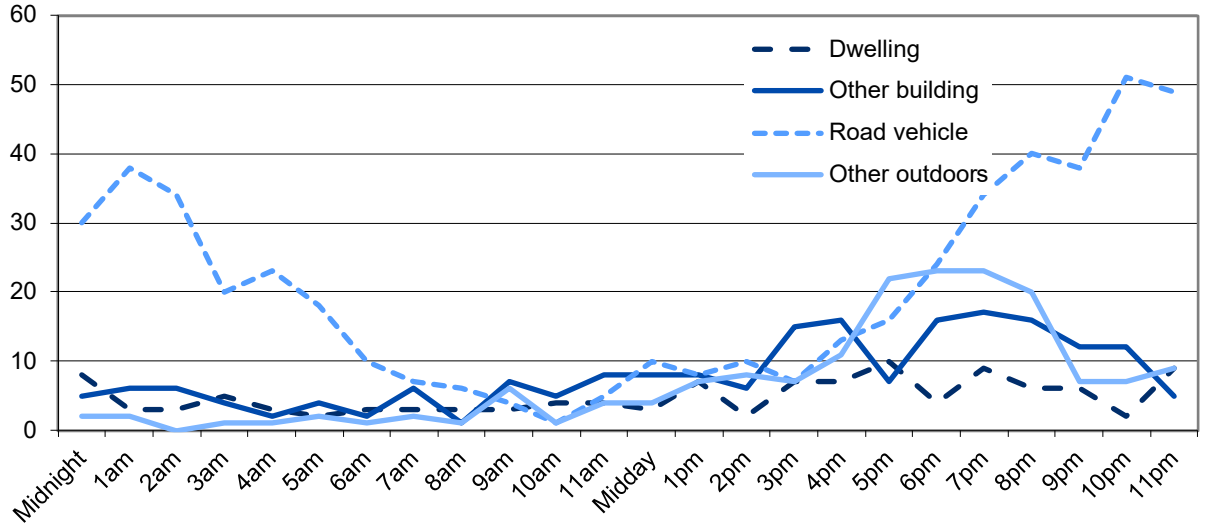
Table 6: Number and percentage of deliberate primary and secondary fires, by time of day

	Number				Percentage			
	2018-19	2019-20(r)	2020-21	2021-22(p)	2018-19	2019-20	2020-21	2021-22
Primary								
Midnight - 5.59 a.m.	354	376	275	222	28	30	26	22
6.00 a.m. - 11.59 a.m.	129	129	108	97	10	10	10	10
Midday - 5.59 p.m.	268	248	209	219	21	20	20	22
6.00 p.m. - 11.59 p.m.	498	496	446	439	40	39	42	44
Late call (a)	10	12	22	16	1	1	2	2
Secondary								
Midnight - 5.59 a.m.	596	465	423	415	10	10	9	8
6.00 a.m. - 11.59 a.m.	504	359	396	321	8	7	8	6
Midday - 5.59 p.m.	2,061	1,402	1,379	1,486	33	29	29	29
6.00 p.m. - 11.59 p.m.	3,096	2,560	2,619	2,897	49	53	54	57
Late call (a)	5	6	10	8	0	0	0	0

(a) 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 service as a result of a press report or inquest) and the fire and rescue service attended.
(r) Revised data.
(p) Provisional data.

Chart 12 shows that deliberate fires in dwellings, other buildings and other outdoor deliberate fires follow a similar pattern in terms of the time of day, with most occurring between midday and midnight. However for road vehicles, distinct peaks can be seen in the timing of these fires, with 76% occurring between 7 p.m. and 5.59 a.m. during 2021-22.

Chart 12: Number of deliberate primary fires, by time of day and location 2021-22 (p)



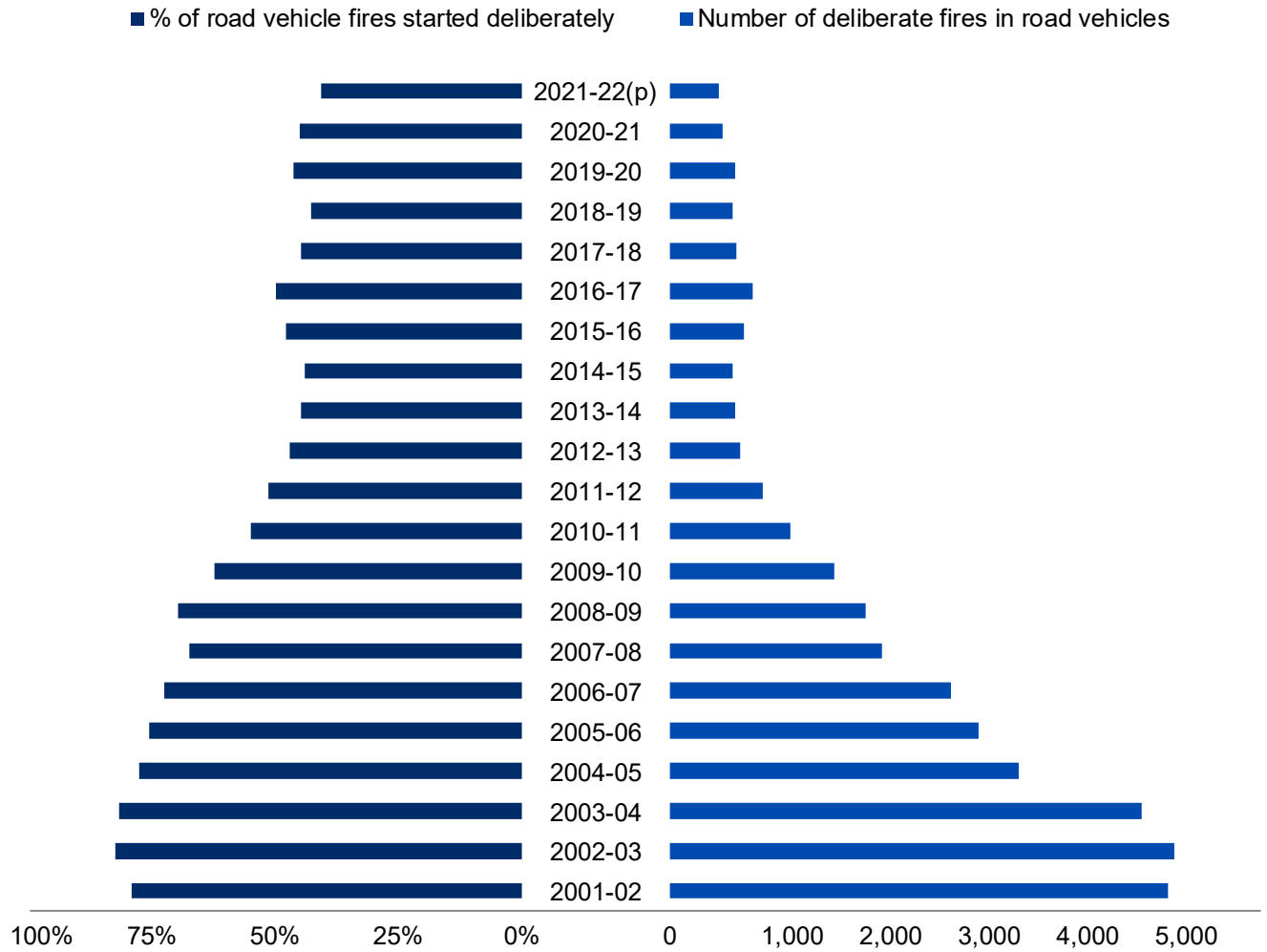
(p) Provisional data.

Road vehicle fires

Fires in road vehicles have consistently made up the majority of deliberate primary fires in Wales, however the proportion has fallen from around 70% in the early part of the time series to around 50% in 2021-22.

The number of deliberate fires in road vehicles fell by 6% in 2021-22 compared with 2020-21 to the lowest figure in the time series. Overall numbers of deliberate primary fires in road vehicles have fallen by 90% since 2001-02, the start of the time series. The chart below also shows the proportion of primary road vehicle fires which were started deliberately; since 2012-13 half or fewer of all road vehicle fires were started deliberately; in 2021-22 41% of primary fires in road vehicles were deliberate.

Chart 13: Percentage and number of deliberate primary fires in road vehicles



(p) Provisional data.

In 2021-22, there were 499 fires started deliberately in vehicles, and a further 24 in derelict vehicles; in total this is 25 fewer than in the previous year. Most vehicles set on fire were cars, almost two thirds of all deliberate primary road vehicle fires. In 2021-22, of the 720 (accidental and deliberate) fires in cars, 43% were started deliberately.

Of fires in other vehicles, caravan (85%), motorcycle (83%) and minibus (67%) fires saw the largest proportions of deliberate fires in 2021-22 although numbers of such fires are not high. 42% of deliberate

primary vehicle fires involved stolen or abandoned vehicles, compared with just 3% of accidental primary vehicle fires.

Table 7: Number and percentage of deliberate road vehicle fires, by vehicle type

	Number					Percentage which are deliberate				
	2017-18	2018-19	2019-20	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22
Agricultural	2	1	3	4	2	2	1	4	5	3
Bus/coach	0	0	0	0	0	0	0	0	0	0
Car	452	443	422	331	313	47	46	48	48	43
Caravan (a)	27	28	28	29	22	75	72	72	91	85
Lorry/HGV	4	4	4	3	2	8	7	7	6	4
Minibus	2	4	6	3	2	50	57	60	60	67
Motor home	3	3	6	0	1	20	20	30	0	5
Motorcycle	85	69	81	62	68	89	79	87	87	83
Multiple vehicles	18	8	17	10	2	62	44	81	67	40
Van	66	65	84	66	61	41	38	48	42	39
Other (b)	18	10	19	25	26	43	28	40	42	42
All deliberate primary road vehicle fires	**677**	**635**	**670**	**533**	**499**	**45**	**43**	**47**	**45**	**41**
of which										
stolen vehicles	45	34	32	30	25	88	100	89	94	96
abandoned vehicles	302	252	270	215	203	93	91	95	95	91
All deliberate secondary road vehicle fires (c)	43	36	22	15	24	84	86	76	65	67
All deliberate road vehicle fires	**720**	**671**	**692**	**548**	**523**	**46**	**44**	**47**	**46**	**42**

(a) Includes caravans on tow.
(b) Includes bicycles, tankers and trailers.
(c) Derelict vehicles.
(p) Provisional data.

In the period 2009-10 to 2013-14 there had been a sharp fall in the number of abandoned vehicles which were deliberately set alight. Since this time numbers have seen some fluctuation but have generally been more stable. The numbers of stolen vehicles which have been deliberately set on fire are fewer than those abandoned but there has been more of a sustained downward trend.

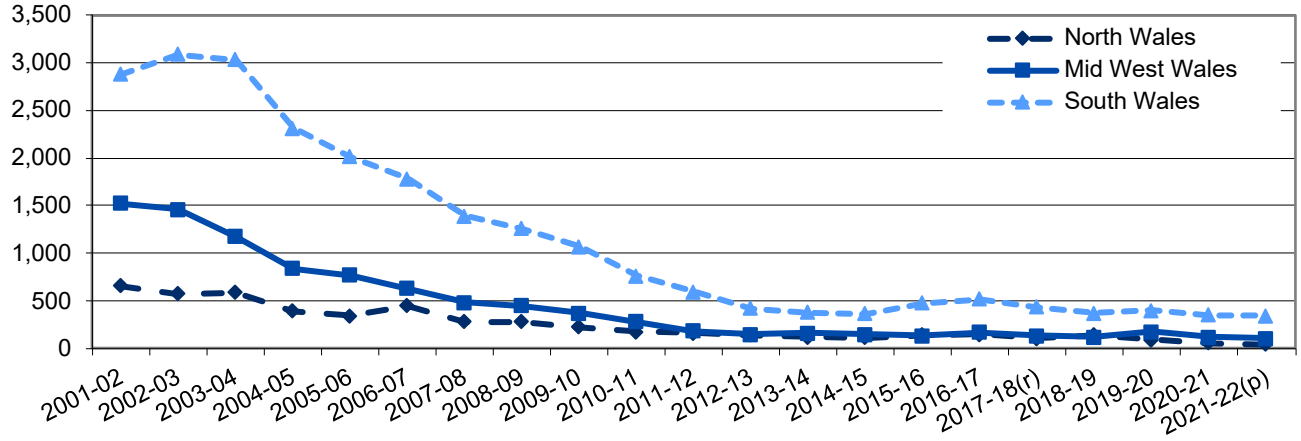
The majority (almost 7 in 10) of deliberate primary fires in road vehicles occurred in South Wales in 2021-22. Throughout the time series the proportion occurring in South Wales has consistently been the highest of the FRAs, varying between 57% and 69%. Mid and West Wales saw 21% of road vehicle fires in 2021-22 whilst 9% occurred in North Wales.

Numbers of road vehicle fires in all 3 Welsh FRSs saw decreases in 2021-22 compared with 2020-21; in North Wales numbers fell by 19%, in Mid and West Wales by 12% and in South Wales by 3%. At the beginning of the time series (2001-02) numbers of deliberate fires in road vehicles were far higher and in the years to 2011-12 a steady decrease can be observed. However, in more recent years the fall is less noticeable and all FRAs have seen small year on year rises from time to time. Compared with 2001-02 numbers have fallen by a similar proportion in all three FRAs; Mid and West Wales and North Wales have seen a fall of 93% whilst in South Wales there has been a fall of 88%.

The Wales Arson Reduction Strategy highlighted two key factors contributing to arson: the need to promptly remove unwanted and abandoned vehicles and to reduce vehicle crime. The removal of abandoned vehicles on open land or any land forming part of the highway is the responsibility of the respective Local Authority.

The Wales Arson Reduction Strategy noted that vehicle crime continues to fall, reflecting that vehicles are designed and built more securely. According to police recorded crime data (not currently National Statistics) published by the Home Office[3], offences against vehicles fell by 82% and thefts of vehicles fell by 79% between 2002-03 and 2021-22. In 2021-22 there was a 13% increase in thefts of vehicles and a small (less than 1%) increase in all vehicle offences. It is likely that the COVID-19 pandemic had an impact on numbers of these offences in 2020-21 and part of 2021-22.

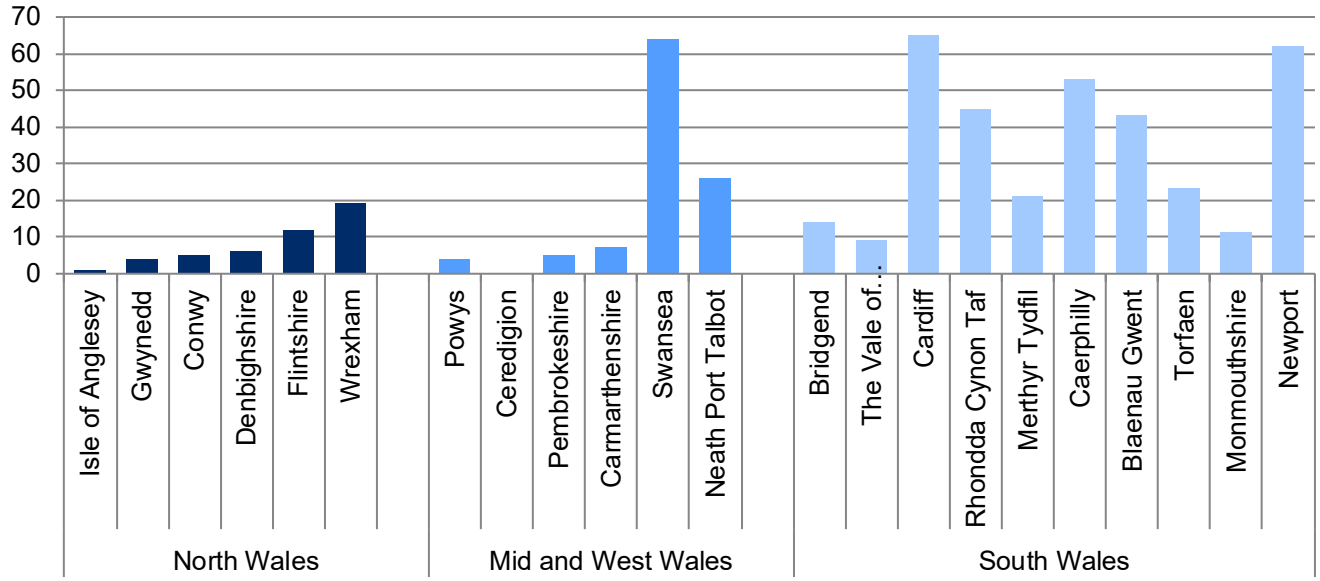
Chart 14: Number of deliberate primary fires in road vehicles, by fire and rescue authority



(p) Provisional data.

Cardiff (65) and Swansea (64) had the highest number of deliberate primary road vehicle fires in 2021-22, each equating to 13% of the number in Wales in 2021-22, while Newport had the third most at 62 (equating to 12% of the Wales total). Merthyr Tydfil was the local authority with the largest proportion of primary fires in road vehicles which were deliberate (75%), followed by Newport (67%).

Chart 15: Number of deliberate primary fires in road vehicles, by local authority 2021-22(p)



(p) Provisional data

[3]Police Recorded Crime Open data tables

School fires

In 2021-22 there were 5 deliberate primary fires in schools, equating to a quarter of all fires in schools. The peak figure in the time series (as seen below in chart 16) was 79 deliberate fires in schools in 2002-03. It should be noted that due to COVID-19 there were periods of 2020-21 when schools in Wales were closed to most pupils.

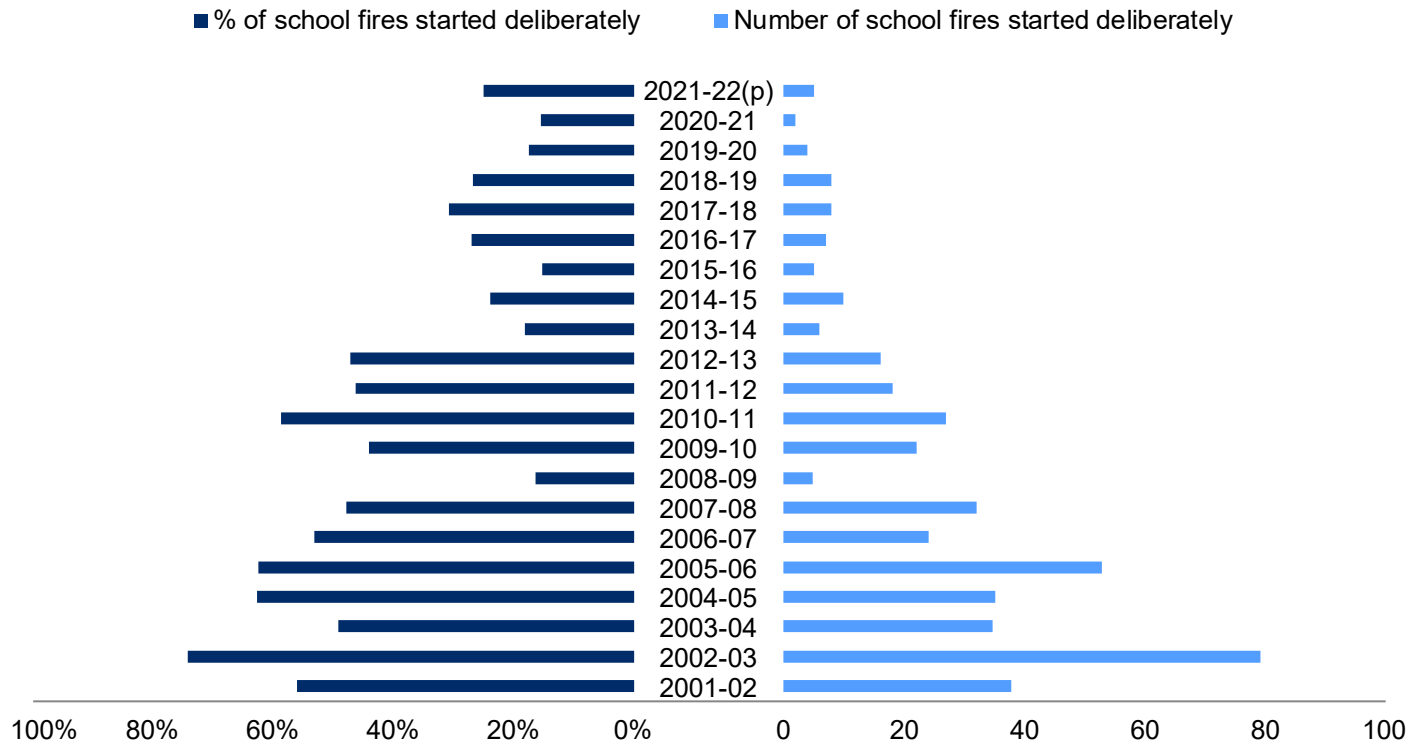
Table 8: Number of school fires, by motive and fire and rescue authority

	North Wales		Mid and West Wales		South Wales		Wales	
	Accidental	Deliberate	Accidental	Deliberate	Accidental	Deliberate	Accidental	Deliberate
2012-13	7	1	5	3	6	12	18	16
2013-14	4	1	12	3	11	2	27	6
2014-15	4	0	13	2	15	8	32	10
2015-16	7	2	8	0	13	3	28	5
2016-17	2	1	5	1	12	5	19	7
2017-18	5	3	4	3	9	2	18	8
2018-19	2	4	9	2	11	2	22	8
2019-20	5	1	9	1	5	2	19	4
2020-21	3	0	5	1	3	1	11	2
2021-22(p)	3	2	3	1	9	2	15	5

(p) Provisional data.

The chart below shows the number of deliberate fires in schools occurring each year, along with the associated percentage of fires in schools which were started deliberately. Every year since 2013-14, less than a third of fires in schools each year were started deliberately.

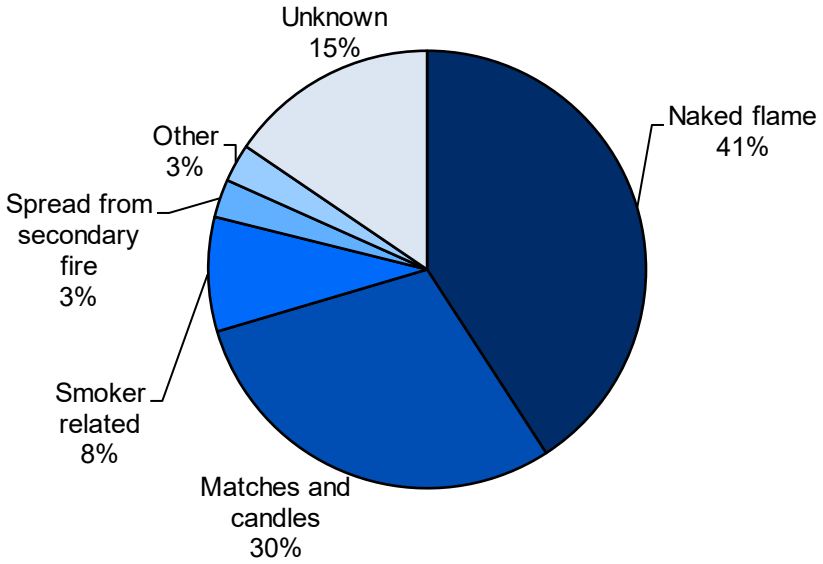
Chart 16: Percentage and number of deliberate fires in schools



(p) Provisional data.

Of the 71 deliberate fires in schools since 2012-13, 41% were started with a naked flame, 30% with matches or candles and 8% were smoker related. A further 15% have unspecified sources. In 2021-22, all 5 deliberate fires were started with a naked flame.

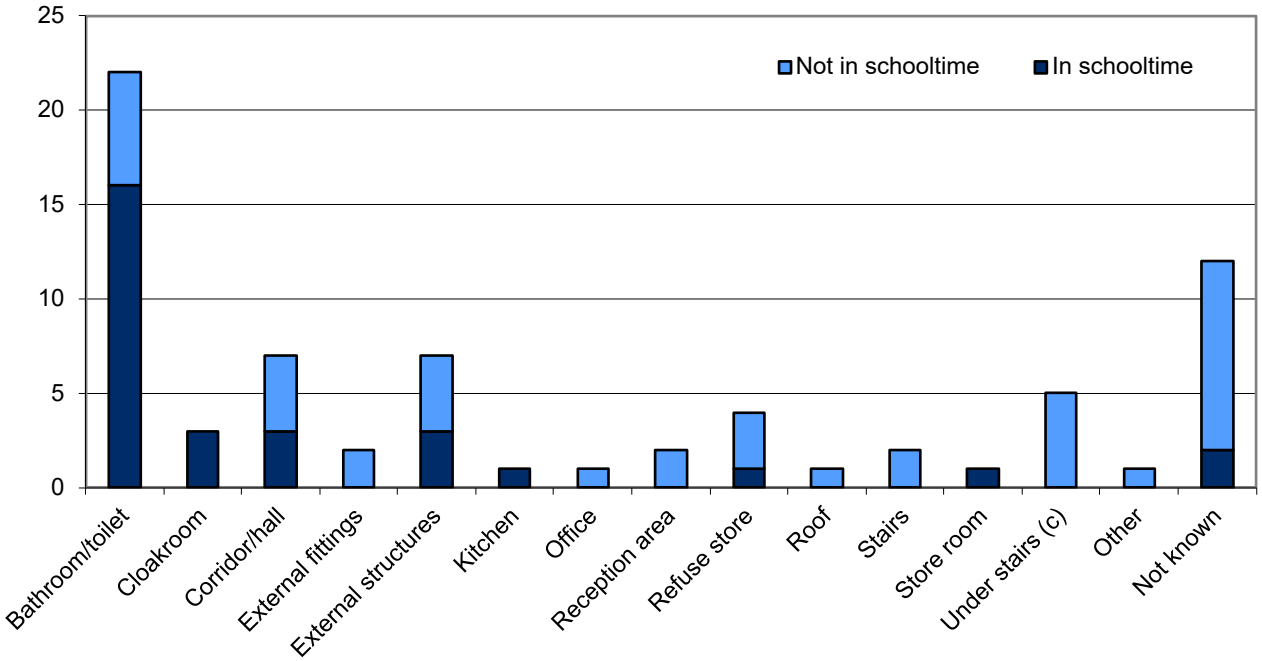
Chart 17: Source of ignition of deliberate primary fires in schools, 2012-13 to 2021-22(a)



(a) Since numbers of deliberate fires in schools are small, chart 17 is based on ten years of data from IRS (2012-13 to 2021-22).

Of the 71 deliberate fires in schools between 2012-13 and 2021-22, 30 (42%) occurred in school hours. Deliberate fires in schools occurred most frequently in bathrooms or toilets; of the fires starting here, almost three-quarter occurred during school hours.

Chart 18: Deliberate fires started in schools, by room and time, 2012-13 to 2021-22(a)(b)

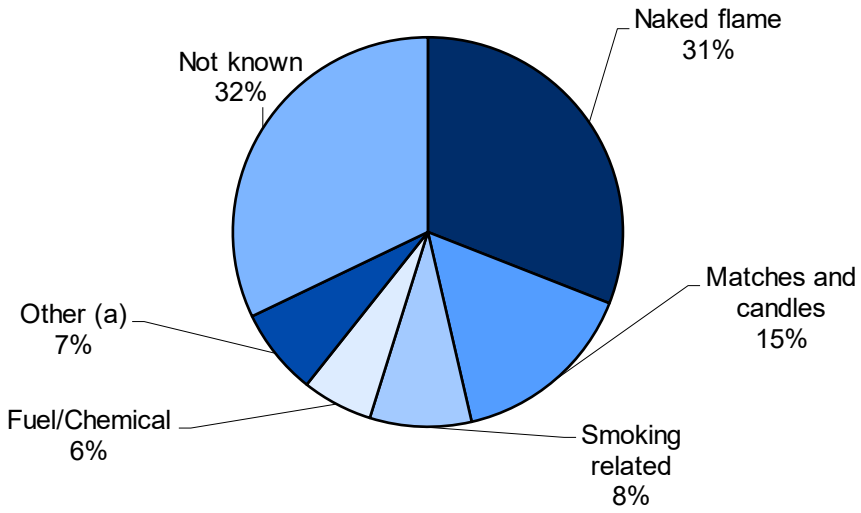


(a) School hours are 08:30- 15:59 and exclude weekends and the month of August.
(b) Since numbers of deliberate fires in schools are small, chart 18 is based on ten years of data from IRS (2012-13 to 2021-22).
(c) Enclosed, storage area.

Source and hazardous materials (all primary fires)

Detailed information is only available for the source of primary fires. In the 5 years from 2017-18 to 2021-22 there has been a total of 5,772 deliberate primary fires. During this period, the source of ignition in 31% of deliberate primary fires was a naked flame, and in 15% matches and/or candles. In each year these two categories have been the largest (where the source is known) although the percentage due to matches and candles has noticeably dropped from a peak of 48% in 2009-10 to 15% in 2021-22, and the number of fires attributable to this source has dropped 93%.

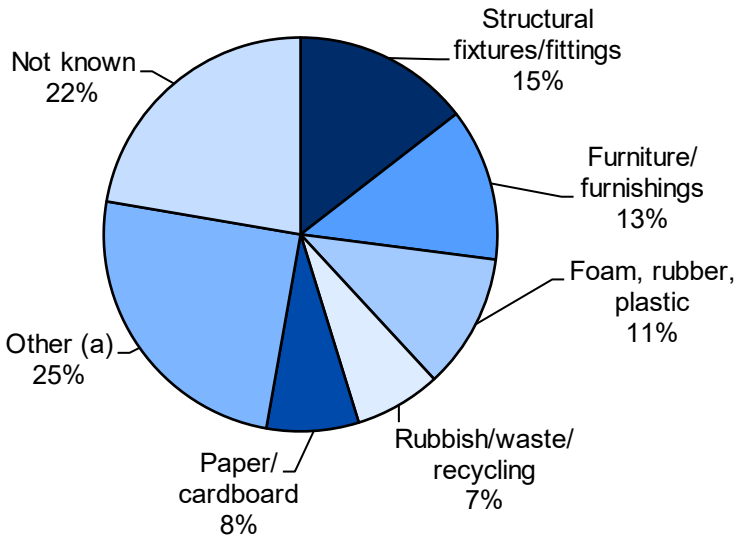
Chart 19: Source of ignition of deliberate primary fires, 2017-18 to 2021-22



(a) 'Other' includes 'spread from secondary fire', 'fireworks', 'cooking appliance', 'electricity supply', 'bombs and explosives', 'heating equipment', 'industrial equipment', 'other domestic style appliance' and 'wet hay'.

In the 5,772 deliberate primary fires for the combined years 2017-18 to 2021-22, structural fixtures and fittings was the material first ignited in 15% of incidents. In this 5 year period, only 18% of primary fires where the first ignited item was structural fixtures and fittings, were started deliberately. However, half of all primary fires where the first ignited items were furniture or furnishings, were started deliberately.

Chart 20: Materials first ignited in deliberate primary fires, 2017-18 to 2021-22



(a) 'Other' includes 'vegetation', 'clothing/textiles', 'explosives, gas, chemicals', 'wood', 'none', 'decoration/celebration', 'food' and 'animal'.

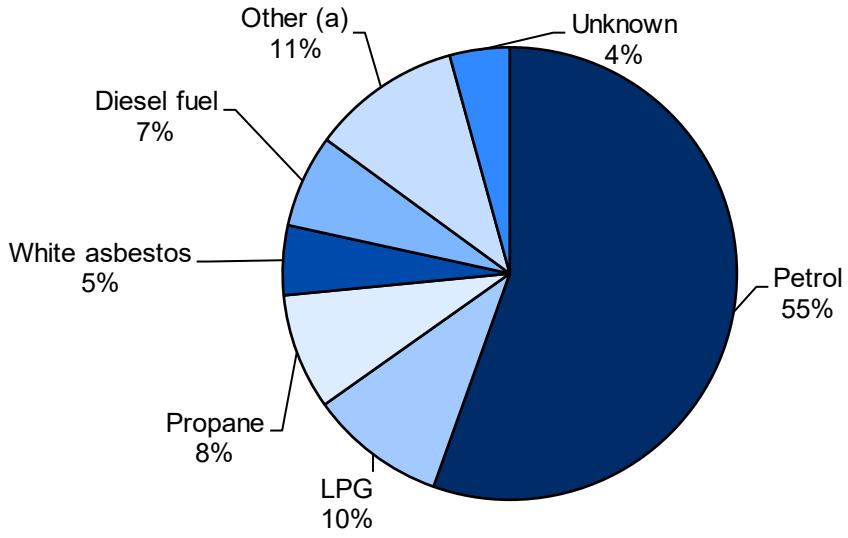
Of the 5,772 deliberate primary fires in the last 5 years, in 4,890 (85%) the cause of spread of the fire was identified; in 13% of all deliberate primary fires in this period spread due to furniture and furnishings and 13% spread due to structural fixtures and fittings (external and internal); a further 13% spread due to foam, rubber and plastic. In 15% of deliberate primary fires the cause of the spread was unknown.

In 15% of deliberate primary fires, rapid growth was recorded; petrol and oil products were found to be the cause in the majority of these cases, over two thirds in the last 5 years.

Deliberate primary fires tend to be single-seated, only 4% over the last 5 years have been multi-seated.

In the combined years 2017-18 to 2021-22, there were a total of 401 deliberate primary fires involving hazardous materials (7% of all deliberate primary fires), of which, 19 involved multiple hazardous materials. In total there were 422 instances of hazardous materials being involved in deliberate primary fires. The largest proportions of instances involved petrol (55%) and liquefied petroleum gas LPG (10%).

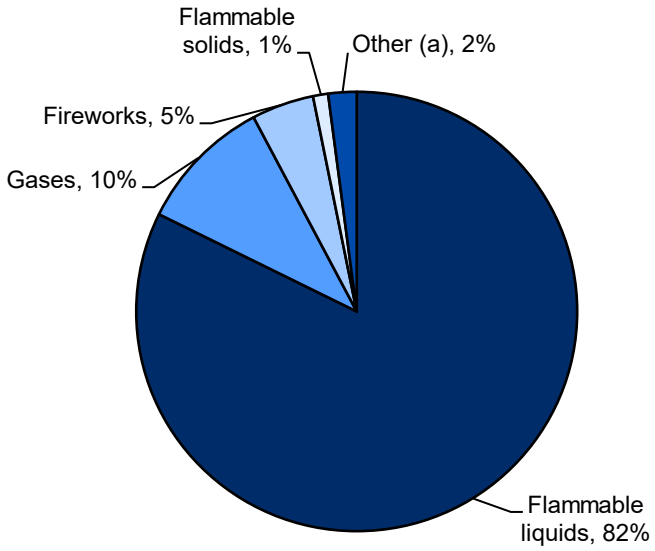
Chart 21: Hazardous materials involved in deliberate primary fires, 2017-18 to 2021-22



(a) 'Other' includes Oxygen, refrigerated liquid, kerosene, hydrochloric acid, sodium hydroxide solution, butane, methane, blue asbestos, ethanol, ammonia, hydrogen sulphide, turpentine, potassium chlorate, sulphuric acid, aerosols and carbon monoxide.

There were 1,833 instances of dangerous substances (Chart 22) being involved in primary fires over the last 5 years, of these 723 (41%) were involved in deliberate primary fires. The majority of these involved 'flammable liquids' (82%), the next largest proportion was 'gases' (10%). These were also the largest categories in accidental primary fires although the percentages were closer (66% and 25% respectively).

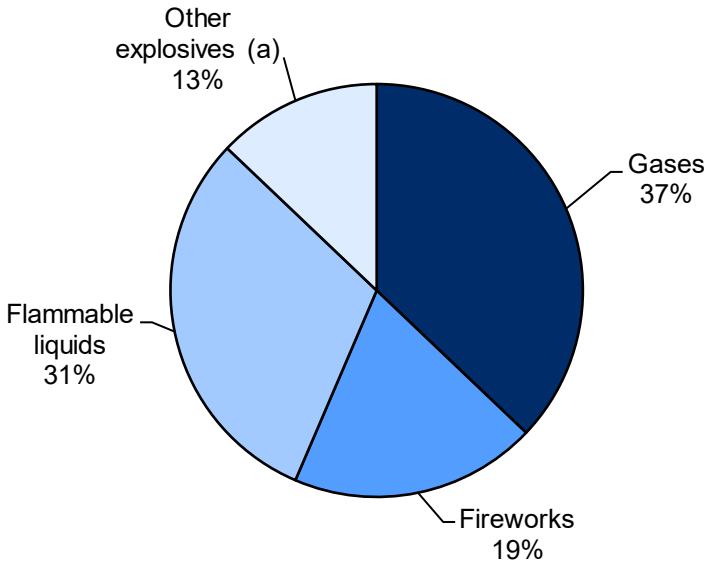
Chart 22: Dangerous substances in deliberate primary fires, 2017-18 to 2021-22



(a) 'Other' Includes other explosives, acetylene and ammunition.

There were 245 explosions (chart 23) involved in primary fires in the years 2017-18 to 2021-22. These may have occurred before the fire, during the fire, both before and during, or the sequence of events maybe unknown. Of these, 62 explosions (25%) were recorded in relation to deliberate fires. Gases caused the largest number of explosions (37%) in deliberate fires, whilst flammable liquids caused 31% and fireworks 19%. Gases were also the largest cause of explosions in accidental primary fires, equating to 45% during the same period. For most materials causing explosions, between 18% and 23% of fires were deliberate. However, for fires where an explosion was due to fireworks, 92% were started deliberately.

Chart 23: Materials causing explosions in deliberate primary fires, 2017-18 to 2021-22



(a) 'Other explosives' includes acetylene, ammunition, flammable solids and 'other'.

Casualties

There were 2 fatalities and 42 non-fatal casualties due to deliberate fires in 2021-22. Around 4 in 10 non-fatal casualties from deliberate fires in 2021-22 occurred in dwellings. Cumulatively, over the last 5 years 15% of fatalities and 12% of non-fatal casualties in fires occurred in deliberate fires.

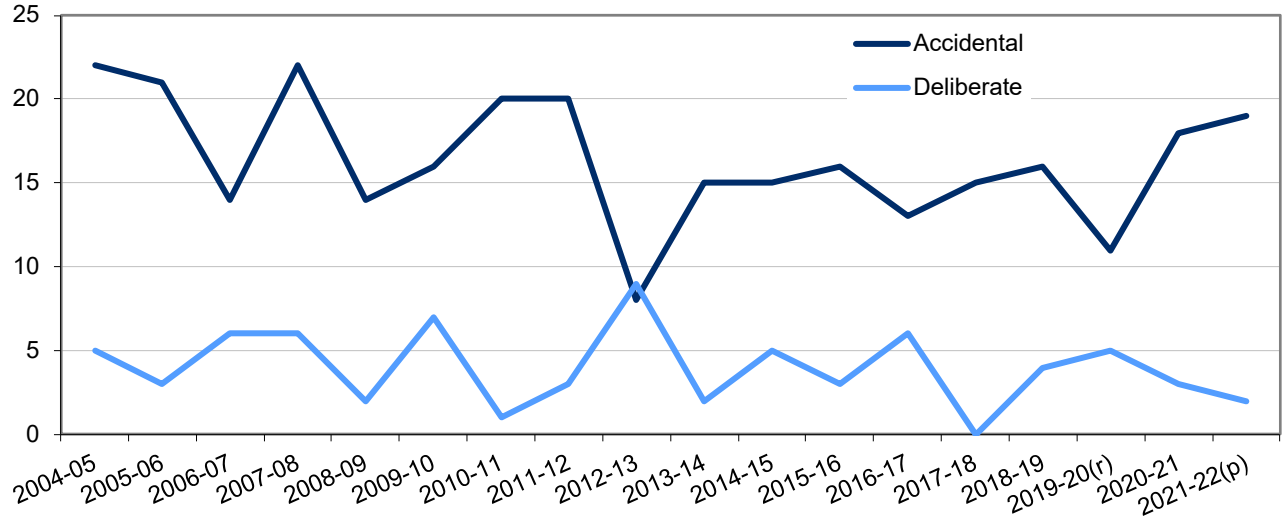
Table 9: Number of casualties in deliberate fires, by location

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Dwellings										
Fatal	8	1	4	1	1	0	1	1	2	1
Non-fatal	30	51	32	40	48	31	48	42	29	18
Other buildings										
Fatal	0	0	0	2	0	0	1	1	1	.
Non-fatal	1	18	4	14	18	10	17	16	4	13
Road vehicles										
Fatal	0	1	1	0	2	0	2	3	.	1
Non-fatal	4	3	2	3	4	0	5	2	1	5
Other										
Fatal	1	0	0	0	3	0	0	0	0	0
Non-fatal	5	1	3	5	5	6	8	9	2	6
All										
Fatal	9	2	5	3	6	0	4	5	3	2
Non-fatal	40	73	41	62	75	47	78	69	36	42

(p) Provisional data.

For most of the years shown in the chart below, deliberate fires accounted for fewer than half the number of fatalities compared with those from accidental fires. The only exception was 2012-13 when fatalities from deliberate fires outnumbered those from accidental fires (due to a combination of a relatively high number of fatalities from deliberate fires and a low number from accidental fires).

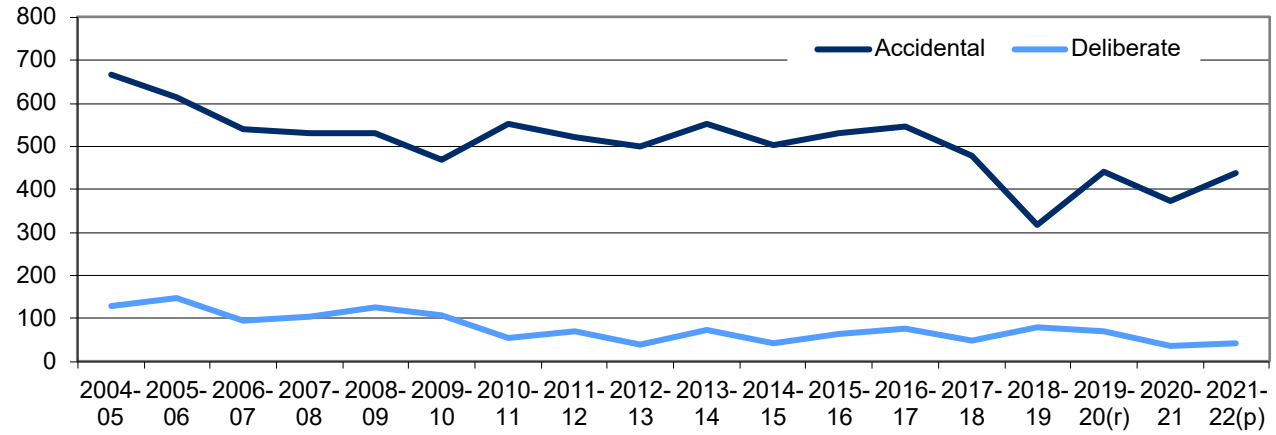
Chart 24: Number of fatalities in fires, by motive



(p) Provisional data.

In the years 2004-05 to 2011-12 there were on average 103 non-fatal casualties resulting from deliberate fires each year. In the 10 years since then, the average has fallen to 56 a year. This equates to 11% of all non-fatal casualties from fires in this period. In 2021-22 there were 42 casualties, 6 more than in 2020-21.

Chart 25: Number of non-fatal casualties in fires, by motive



(p) Provisional data.

In 2021-22, 19 non-fatal casualties (45%) from deliberate fires went to hospital. Of the 15 who were judged to have slight injuries, 6 had burns and 5 were overcome by gas or smoke.

Table 10: Number and percentage of non-fatal casualties by nature of injury sustained in deliberate fires

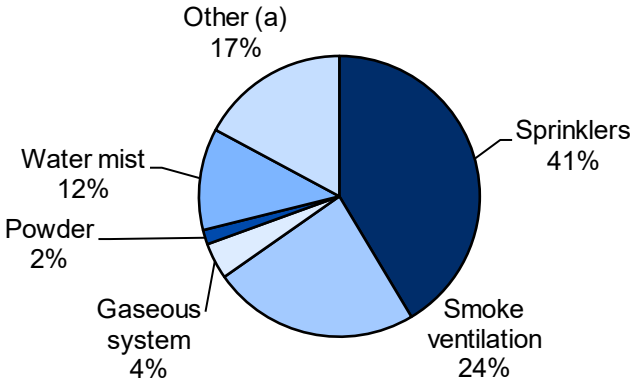
	Number					Percentage				
	2017-18	2018-19	2019-20	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22
First aid (a)	**17**	**14**	**14**	**12**	**9**	**36**	**18**	**20**	**33**	**21**
Precautionary check recommended	**10**	**19**	**28**	**10**	**14**	**21**	**24**	**41**	**28**	**33**
Slight injuries (b)	**17**	**35**	**22**	**12**	**15**	**36**	**45**	**32**	**33**	**36**
Burns	2	6	5	3	6	4	8	7	8	14
Burns and overcome by gas or smoke	0	1	0	0	0	0	1	0	0	0
Overcome by gas or smoke	9	20	9	6	5	19	26	13	17	12
Physical injury	0	3	1	2	3	0	4	1	6	7
Shock	1	1	1	1	0	2	1	1	3	0
Other medical	5	2	3	0	1	11	3	4	0	2
Other/not known	0	2	3	0	0	0	3	4	0	0
Serious injuries (c)	**3**	**10**	**5**	**2**	**4**	**6**	**13**	**7**	**6**	**10**
Burns	2	3	1	0	2	4	4	1	0	5
Burns and overcome by gas or smoke	0	0	0	0	0	0	0	0	0	0
Overcome by gas or smoke	0	4	2	0	2	0	5	3	0	5
Physical injury	1	2	0	1	0	2	3	0	3	0
Shock	0	0	0	0	0	0	0	0	0	0
Other	0	1	2	1	0	0	1	3	3	0
All casualties sent to hospital	**20**	**45**	**27**	**14**	**19**	**43**	**58**	**39**	**39**	**45**
All non-fatal casualties	**47**	**78**	**69**	**36**	**42**	**100**	**100**	**100**	**100**	**100**

(a) First aid given at scene.
(b) Casualty went to hospital, injuries appear to be slight.
(c) Casualty went to hospital, injuries appear to be serious.
(p) Provisional data.

Prevention

The data in this section looks at safety systems present in accidental and deliberate fires, since numbers in deliberate fires alone are small (in the last ten years there have been 105 safety systems recorded present in deliberate fires). In the aggregated figures for the last 5 years, fire safety systems were present at 231 accidental and deliberate primary building fires. However, some buildings have more than one system and there were a total of 239 safety systems present at primary fires. Sprinklers made up 41% of these safety systems. 34% of these primary fires where safety systems were present were deliberate. Throughout the time series sprinklers have been to most common safety system in use.

Chart 26: Safety systems present at primary fires in buildings, by system type, 2017-18 to 2021-22



(a) 'Other System' includes 'Drencher', 'Pressurisation', and 'Foam'.

For the aggregated years 2017-18 to 2021-22, where safety systems were present, more than 6 in 10 operated correctly (although not all of these raised the alarm). Where systems failed to operate, almost two fifths of cases were due to the fire occurring in an area not covered by the safety system.

Looking specifically at deliberate fires (not shown in the table), there were 79 deliberate fires in buildings in the years 2017-18 to 2021-22 where safety systems were present; due to buildings with multiple safety systems in place, the operation (or inaction) of 62 safety systems were recorded and 26 safety systems in deliberate fires were recorded as not operating.

Table 11: Number of safety systems in building fires, by operation and failure reason(a)

	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Operated and raised alarm	**23**	**22**	**28**	**23**	**31**
Operated, but did not raise alarm	**4**	**1**	**8**	**5**	**4**
Did not operate	**22**	**12**	**18**	**11**	**27**
Fire in area not covered by system	8	3	6	7	11
Fault in system	0	0	0	0	0
System damaged by fire	1	0	0	0	0
System turned off	0	0	0	0	0
System not set up correctly	0	0	0	0	2
Other	9	7	9	4	7
of which insufficient heat to activate system (b)	*5*	4	0	2	0
Not known	4	2	3	0	8
Not applicable	0	0	0	0	0

(a) The table refers to the number of safety systems not the number of accidental and deliberate fires in buildings. Data includes some instances where more than one safety system was present at a fire.
(b) Includes fires which were too small to be detected. Derived from a 'free text' field which defines 'other' reasons for system failure.
(p) Provisional data.

In 2021-22 there were smoke alarms present in 72% of accidental primary dwelling fires, and 63% of deliberate dwelling fires. For other buildings in 2021-22, smoke alarms were present in 58% of primary accidental fires and 43% of primary deliberate fires.

Table 12: Number of primary fires in buildings, by presence of smoke alarms and motive

	Accidental					Deliberate				
	2017-18	2018-19	2019-20	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Dwelling										
No alarm	483	509	489	424	417	56	45	55	49	45
Alarm present(a)	1,002	921	1,009	951	1,049	76	80	75	77	75
All primary fires (a)	**1,485**	**1,430**	**1,498**	**1,375**	**1,466**	**132**	**125**	**130**	**126**	**120**
Other building										
No alarm	259	287	251	251	254	148	132	113	98	116
Alarm present(a)	407	376	350	270	348	108	86	155	105	86
All primary fires (a)	**666**	**663**	**601**	**521**	**602**	**256**	**218**	**268**	**203**	**202**

(a) Includes where it was not known whether the building had a smoke alarm.
(p) Provisional data.

At deliberate dwelling fires in 2021-22 where smoke alarms were present, 76% of smoke alarms successfully operated. In accidental dwelling fires 81% of smoke alarms operated correctly. In deliberate other building fires 87% of smoke alarms operated correctly, whilst for accidental fires in other buildings the proportion was 82%.

Table 13: Number of smoke alarms present at primary fires in buildings, by operation (a)

	Accidental					Deliberate				
	2017-18	2018-19	2019-20	2020-21	2021-22(p)	2017-18	2018-19	2019-20	2020-21	2021-22(p)
Dwelling										
Alarm present but did not operate	232	194	208	201	192	19	23	17	13	17
operated:										
and raised alarm	582	559	637	581	659	34	37	40	41	33
but did not raise alarm	174	151	159	149	180	17	18	12	20	22
Total (a)	**988**	**904**	**1,004**	**931**	**1,031**	**70**	**78**	**69**	**74**	**72**
Other building										
Alarm present but did not operate	88	73	61	53	57	13	9	24	3	10
operated:										
and raised alarm	249	244	229	156	203	71	60	112	83	56
but did not raise alarm	50	32	34	33	57	10	8	14	8	12
Total (a)	**387**	**349**	**324**	**242**	**317**	**94**	**77**	**150**	**94**	**78**

(a) The table refers to the number of smoke alarms, rather than the number of fires and so where buildings have multiple alarms, all have been included. For this reason figures may not match between tables 12 and 13. Table only refers to alarms which were known to be present.
(p) Provisional data.

Great Britain comparisons

The table below shows the number of deliberate primary and secondary fires in England, Scotland and Wales. Compared with 2001-02 Wales has seen a marginally larger reduction in the number of deliberate fires, 77%, whilst the figure in England fell by 76%; in Scotland the number fell by 61%. However between 2020-21 and 2021-22 the number of deliberate fires has risen in Wales (up 4%) in England (up 10%) and in Scotland (up 13%). Of all the categories in the table below only deliberate primary fires in Wales saw a decrease.

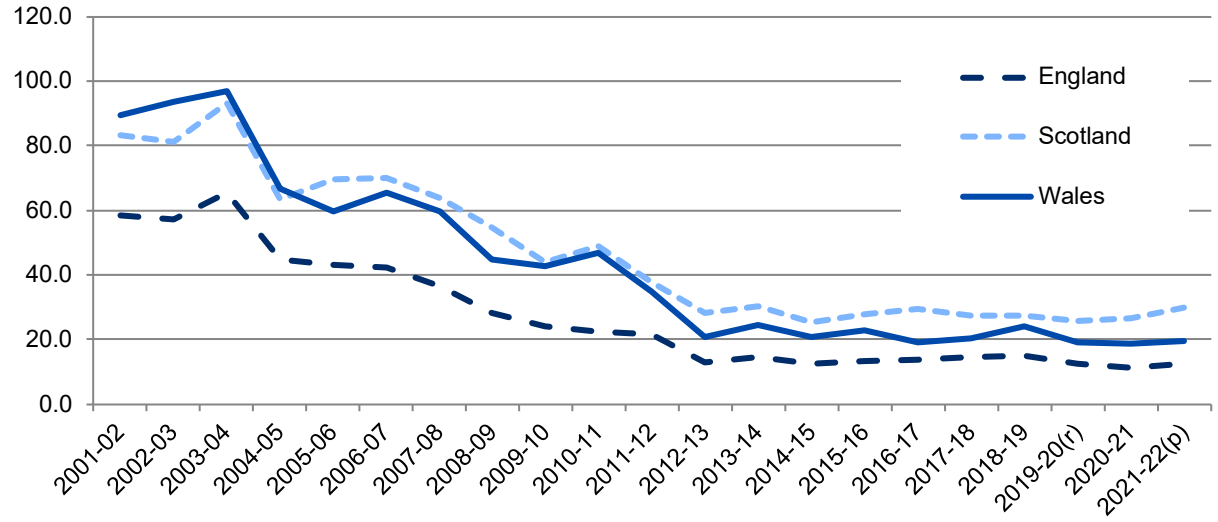
Table 14: Number of deliberate fires in England, Scotland and Wales

	England (a)			Scotland (b)			Wales		
	Primary	Secondary	All(c)	Primary	Secondary	All(c)	Primary	Secondary	All(c)
2012-13	19,433	49,309	68,761	2,833	12,252	15,085	1,405	4,993	6,399
2013-14	17,938	59,700	77,676	2,580	13,447	16,029	1,345	6,224	7,569
2014-15	17,367	51,139	68,528	2,413	11,167	13,582	1,214	5,220	6,434
2015-16	19,371	54,282	73,674	2,587	12,278	14,870	1,370	5,757	7,127
2016-17	22,066	54,081	76,163	2,695	13,193	15,891	1,394	4,540	5,935
2017-18	21,496	59,068	80,596	2,731	12,116	14,849	1,199	5,174	6,374
2018-19	19,779	63,437	83,244	2,504	12,485	14,991	1,259	6,262	7,523
2019-20(r)	19,152	50,664	69,832	2,443	11,652	14,097	1,261	4,792	6,054
2020-21	15,291	48,406	63,714	2,406	12,056	14,463	1,060	4,827	5,887
2021-22(p)	15,712	54,051	69,776	2,417	13,944	16,366	993	5,127	6,122

(a) Data for England are taken from The Home Office publication Fire Statistics: England
(b) Data for Scotland are taken from Scottish Fire and Rescue Service
(c) Includes a small number of deliberate chimney fires.
(r) Revised data
(p) Provisional data.

The chart below shows rates of deliberate fires in Wales and Scotland have consistently been higher than in England, although the gap has narrowed in recent years. All three countries have seen a general downward trend since 2001-02 although since 2012-13 figures have somewhat plateaued.

Chart 27: Rate of deliberate fires in England, Scotland and Wales per 10,000 population (a)



(a) Population data are taken from ONS Mid-Year Estimates and are revised periodically and so rates are subject to change between publications. 2021 population estimates have been taken from the Census
(r) Revised data
(p) Provisional data

Glossary

Accidental fires include those where 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 any fires in occupied buildings where the fire was confined within the chimney structure (and did not involve casualties or rescues or attendance by five or more appliances).

Dangerous substances can spread fire, intensify fire, intensify smoke, render water unsuitable or produce toxic gases. Unlike with the hazardous materials dangerous substances may be grouped into one of the following categories: Fireworks, Acetylene, Ammunition, Other explosives, Gases, Flammable liquids or Flammable solids.

Deliberate fires include those where deliberate ignition is merely suspected.

Dwellings are defined as buildings occupied by households, excluding hotels, hostels and residential institutions (these fall under 'other residential'). 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 caravans, houseboats etc.

Explosion An explosion is a very rapid build up of pressure giving rise to a characteristic 'bang'. The pressure may be sufficient to cause injury to people and structural damage to buildings. Explosions may result from gas leaks, including unburnt fire gases, or from overheated cylinders or unstable solid materials.

False alarms are events in which the Fire and Rescue Service believes they are called to a reportable fire and then find there is no incident**.**

Fatal casualty 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 transpires 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 (FRA) are the three regions (North Wales, Mid and West Wales and South Wales) into which Wales is divided in relation to the fire service.

Hazardous Materials are recorded as individual items (solids, liquids or gases) that can harm people, other living organisms, property, or the environment. Each material has a numeric UN 4 digit numeric code, which can be found in the Dangerous Goods Emergency Action Codes List book.

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 service as a result of a press report or inquest) and which the fire and rescue service 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.

Other buildings fires are fires in other residential or non-residential buildings; other (institutional) residential buildings include properties such as hostels/hotels/B&Bs, nursing/care homes, student halls of residence etc; non-residential buildings include properties such as offices, shops, factories, warehouses, restaurants, public buildings, religious buildings etc

Primary fires include all 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 service 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.

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

Key quality information

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

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

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

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

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

Wales Arson Reduction Strategy

The Joint Arson Group produced the Wales Arson Reduction Strategy in 2007 (it was reviewed in 2009 with an update strategy for 2012-15 published in 2012). The strategy states the priorities of Welsh Arson Reduction Teams (ARTs) are to reduce the numbers of wildfire incidents, deliberate fires in schools, car arson, deliberate fires associated with anti-social behaviour and the number of void and derelict buildings subject to arson. The Wales Arson Reduction Strategy in 2007 proposed measures to reduce the number of deliberate grassland and forest fires.

These include:

- National Curriculum to include “care of the environment”, educating children on the issue outside of the classroom
- several initiatives seek to address this issue i.e. the All Wales School Liaison Core Programme, Crucial Crew, Forest Schools Safety Zone
- implement initiatives which bestow ownership and a sense of pride in communities regarding their immediate environment
- key partnerships should work together to provide a consistent message on grass and forest fires

- youth groups must be supported to deliver diversionary activities for young people during school holidays and to deliver a message on the responsible use of fire.

Relevance

The tables and charts in this bulletin attempt to show the breadth of data available and some of the possible analyses.

The Welsh Government uses the information in this bulletin to monitor the trends in deliberate fires occurring in Wales, for example those occurring in dwellings and on grassland. 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 providing 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. 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 previously available.

For further details of the information collected and held on IRS please see ‘Further details’.

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

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

This Statistical Bulletin is pre-announced and then published on the Statistics & Research website. Furthermore, should the need arise to postpone an output this would follow the Welsh Government's Revisions, Errors and Postponements arrangements.

Data for this bulletin are taken from the same dataset as the annual Fire Statistics and the Grassland fires bulletin which is extracted in June or July each year. This bulletin is published biennially, is usually published in November.

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.

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 Communities and Local Government (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.

UK Comparisons

Whilst England and Scotland do not publish specific deliberate fires bulletins, data by motive 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)

Scottish Fire and Rescue Incident Statistics

Pre 2014-15 data

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

Other data sources

Deliberate fires include those where the motive for the fire was 'thought to be' or 'suspected to be' deliberate. This includes fires to an individual's own property, others' property or property of an unknown owner. Deliberate fires are not the same as arson. Arson is defined under the Criminal Damage Act of 1971 as 'an act of attempting to destroy or damage property, and/or in doing so, to endanger life'. Table 15 shows a comparison between the numbers of arson incidents as recorded by the police and the number of deliberate primary and secondary fires. It is expected that the majority of deliberate secondary fires would not be counted as arson.

Table 15: Comparison of police recorded crime and fire and rescue service fire incident data in Wales

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Police Recorded Crime (a)										
Arson	1,244	1,163	1,243	1,505	1,632	1,949	2,769	2,112	1,742	1,941
Fire and Rescue										
Deliberate Primary	1,405	1,345	1,214	1,370	1,394	1,199	1,259	1,261	1,060	993
Deliberate Secondary	4,993	6,224	5,220	5,757	4,540	5,174	6,262	4,792	4,827	5,127
Total	6,399	7,569	6,434	7,127	5,935	6,374	7,523	6,054	5,887	6,122

Source: Arson data from the Home Office, fire data from FDR1 and FDR3 fire and Rescue Forms, Incident Reporting System (from 2009-10)
(a) Following an assessment of crime statistics by the UK Statistics Authority, published in January 2014, the statistics based on police recorded crime data were found not to meet the required standard for designation as National Statistics.

National Statistics status

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

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

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

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained and reinstated when standards are restored.

The statistics last underwent a full assessment against the Code of Practice in June 2012 (Report number 208).
Since the review by the UKSA, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- brought forward the publication date improving timeliness
- added Local Authority analysis
- extended the use of weather data
- improved Key Quality information
- publication of excel tables alongside the bulletin

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural wellbeing of Wales. The Act puts in place seven wellbeing 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 wellbeing goals, and (b) lay a copy of the national indicators before Senedd Cymru. Under section 10(8) of the Wellbeing of Future Generations Act, where the Welsh Ministers revise the national indicators, they must as soon as reasonably practicable (a) publish the indicators as revised and (b) lay a copy of them before the Senedd. These national indicators were laid before the Senedd in 2021. The indicators laid on 14 December 2021 replace the set laid on 16 March 2016.

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

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

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

Further details

This document is available at: http://gov.wales/statistics-and-research/deliberate-fires/?lang=en

Fire Statistics Data Quality Report

Incident Recording System Questions and Lists

More information is available on StatsWales.

Analysis of annual Welsh fire incident data can be found in the bulletin 'Fires Statistics, 2021-22':

The bulletin includes charts and information on causes of fires and the presence of smoke alarms.

The report 'Evaluation of the Arson Prevention Programme' focuses on three of the main initiatives; Arson Reduction Teams (ARTs); the Arson Small Grants Programme; and the Grassland Fire Initiative.

Next update

Deliberate Fires 2023-24 to be published in November 2024

We want your feedback

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

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