



## Grassland fires, 2022-23

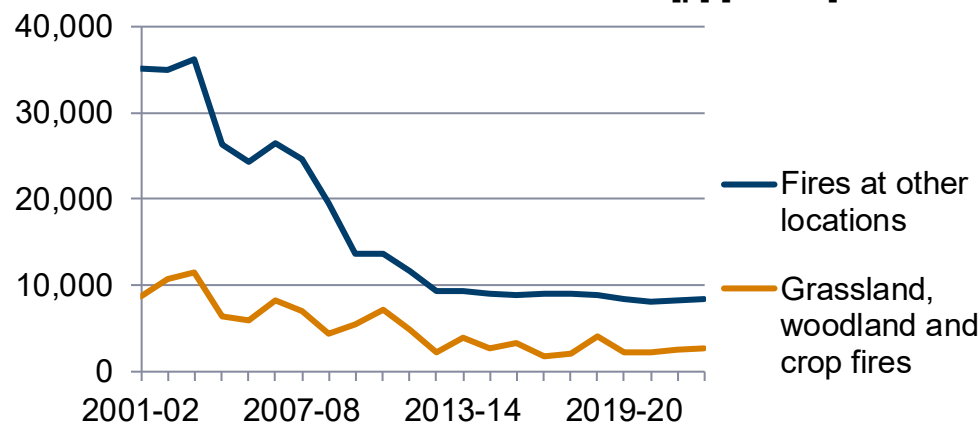
30 November 2023  
SB 43/2023

Almost one in four attendances by a Fire and Rescue Authority (FRA) at fires in 2022-23 were grassland, woodland or crop related. In this bulletin, a grassland fire is a fire which has been assigned a location code of "grassland, woodland or crops" by the relevant FRA and should not be considered a measure of wildfires.



The Welsh FRAs attended 2,619 grassland, woodland and crop fires in 2022-23, an increase of 7% compared with 2021-22. The number of these fires is prone to fluctuation and annual year on year percentage changes vary.

**Figure 1: Numbers of fires on grassland, woodland and crops and other locations in Wales 2001-02 to 2022-23[p] [Note 1]**



Description of Figure 1: A line chart showing the number of grassland, woodland and crop fires and fires at other locations in Wales between 2001-02 and 2022-23. Both time series show a general downward trend, though since 2011-12 this trend has been less marked.

[Note 1] 2021-22 data are revised.

[p] Provisional data

- In 2022-23, 7 in 10 fires on grassland, woodland and crops were started deliberately. ([Table 6](#))
- 65% of grassland, woodland and crop fires in 2022-23 occurred in the months April 2022, July 2022 and August 2022 ([Table 7](#)). Met Office weather data shows that 40% of the hours of sunshine and only 10% of rainfall occurred in these months in 2022-23.
- There were more than 6 times as many grassland, woodland and crop fires in August 2022 compared to August 2021.

### About this bulletin

This bulletin is complementary to data on [fire incidents](#) published in Oct 2023. It examines the impact and patterns in grassland, woodland and crop fires in the financial year from April 2022 to March 2023, and comparisons are made with April 2021 to March 2022, a period within the coronavirus (COVID-19) pandemic. Any increase or decrease in numbers should be considered within this context.

The Welsh Government compiles these statistics from reports submitted by all three Fire and Rescue Authorities (FRAs) in Wales to the Home Office.

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## Section 1: Fires

Fires are classed as primary, secondary or chimney fires.

Primary fires include:

- any fire in a non-derelict buildings, vehicle, or outdoor structures
- any fire involving casualties or rescues
- any fire 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.

For the definition of chimney fires please see the [Glossary](#).

Grassland, woodland and crop locations include primary fires in allotments, gardens, crops, woods and other agricultural locations, and secondary fires on heathland and as a result of intentional straw and stubble burning, as well as fires on grassland.

This section looks at the total number of grassland, woodland and crop fires that occurred as well as the total number of fires attended which includes fire-related false alarms.

Table 1 shows that Welsh FRAs attended 27,074 fires and fire false alarms in 2022-23. Of these, 13% or 3,547 (including 928 fire false alarms) related to grassland, woodland and crop locations. In 2022-23 attendances at grassland, woodland and crop fires and fire false alarms rose by 3% compared with 2021-22 but has fallen by 60% compared with the peak of 8,837 incidents in 2010-11.

**Table 1: Number of grassland, woodland and crop fires and fire false alarms, by incident type, 2018-19 to 2022-23[p]**

	2018-19	2019-20	2020-21	2021-22[r]	2022-23[p]
Primary fires	4,392	4,279	3,796	3,944	3,918
of which were grassland, woodland and crops	253	112	180	140	180
Secondary fires	8,184	5,978	6,197	6,496	6,871
of which were grassland, woodland and crops	3,761	2,076	2,049	2,318	2,439
All fires [Note 1]	12,911	10,587	10,326	10,740	11,066
of which were grassland, woodland and crop fires	4,014	2,188	2,229	2,458	2,619
Fire false alarms	14,485	14,281	14,879	15,319	16,008
Fire false alarms with location recorded as grassland, woodland or crops	1,139	821	1,084	972	928
All fires and fire false alarms	27,396	24,868	25,205	26,059	27,074
of which grassland, woodland and crop fires and fire false alarms	5,153	3,009	3,313	3,430	3,547

Description of Table 1: The table gives the number of primary and secondary fires, and fire false alarms, and how many of these were grassland, woodland and crop related. The table shows the number of

primary and secondary grassland, woodland and crop fires increased in 2022-23 compared to the previous year, whereas the number of fire false alarms decreased.

[Note 1] Includes chimney fires.

[r] Revised data.

[p] Provisional data.

**Fire false alarms:** 6% of fire false alarms relate to grassland, woodland and crop locations in 2022-23. The majority (99%) of the fire false alarms attended in 2022-23 by the FRAs on grassland, woodland and crops were due to calls made with good intent; only 1% were due to malicious calls. In 2022-23 FRAs in Wales attended 5% fewer fire false alarms on grassland, woodland and crops than in the previous year.

**Fires:** Of the 11,066 fires attended in Wales in 2022-23, 2,619 (24%) occurred on grassland, woodland and crops. Whilst only 5% of all primary fires took place on grassland, woodland or crops, 35% of secondary fires occurred on grassland, woodland or crops.

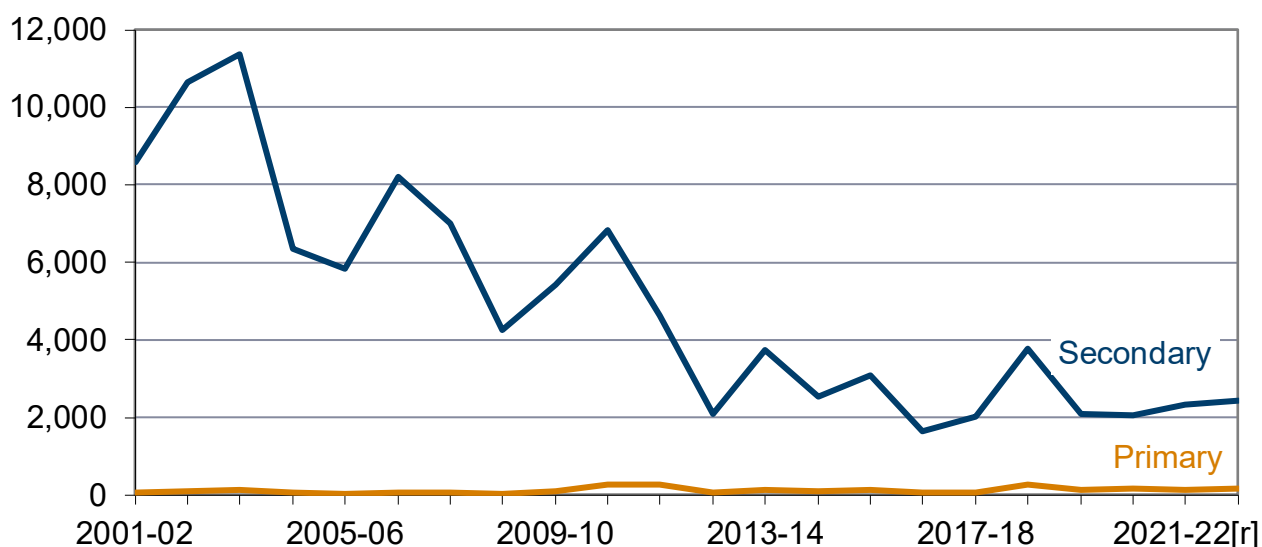
In 2022-23, the number of grassland, woodland and crop fires (excluding fire false alarms) attended by the Welsh FRAs increased by 7% compared with 2021-22. Compared with the peak figure in 2003-04, the 2022-23 figure is 77% lower.

Numbers of fires in locations other than grassland, woodland and crops rose by 2% compared with 2021-22.

Since 2001-02 the proportion of fires occurring on grassland, woodland and crops range from a low of 16% (in 2016-17) up to 34% (in 2010-11).

The vast majority of grassland, woodland and crop fires attended are secondary fires (between 92% and 99% each year since 2001-02). By definition, the majority of secondary fires occur outdoors and so numbers of these fires are likely to be influenced by weather conditions.

**Figure 2: Number of grassland, woodland and crop fires, by type, 2001-02 to 2022-23[p]**



Description of Figure 2: A line chart showing the annual number of grassland, woodland and crop fires, split into primary and secondary fires. The chart shows that each year only a small number of fires were

primary fires, and the majority are secondary fires. Following large decreases in the early part of the time series, recent years (since 2012-13) have seen numbers more stable with smaller year on year increases and decreases.

[r] Revised data.

[p] Provisional data for 2022-23.

### Primary grassland, woodland and crop fires

In 2022-23, 180 primary grassland, woodland and crop fires were attended in Wales, an increase of 29% on the number in 2021-22. The locations of these primary fires are shown in [Figure 3](#). Over half the primary grassland fires in 2022-23 occurred in the South Wales FRA Region (52%) and 36% were in Mid and West Wales. The remaining 12% were in North Wales. All FRAs saw an increase in the number of primary grassland fires in 2022-23 compared to the previous year, up 57% in North Wales, up 21% in Mid and West Wales and up 29% in South Wales.

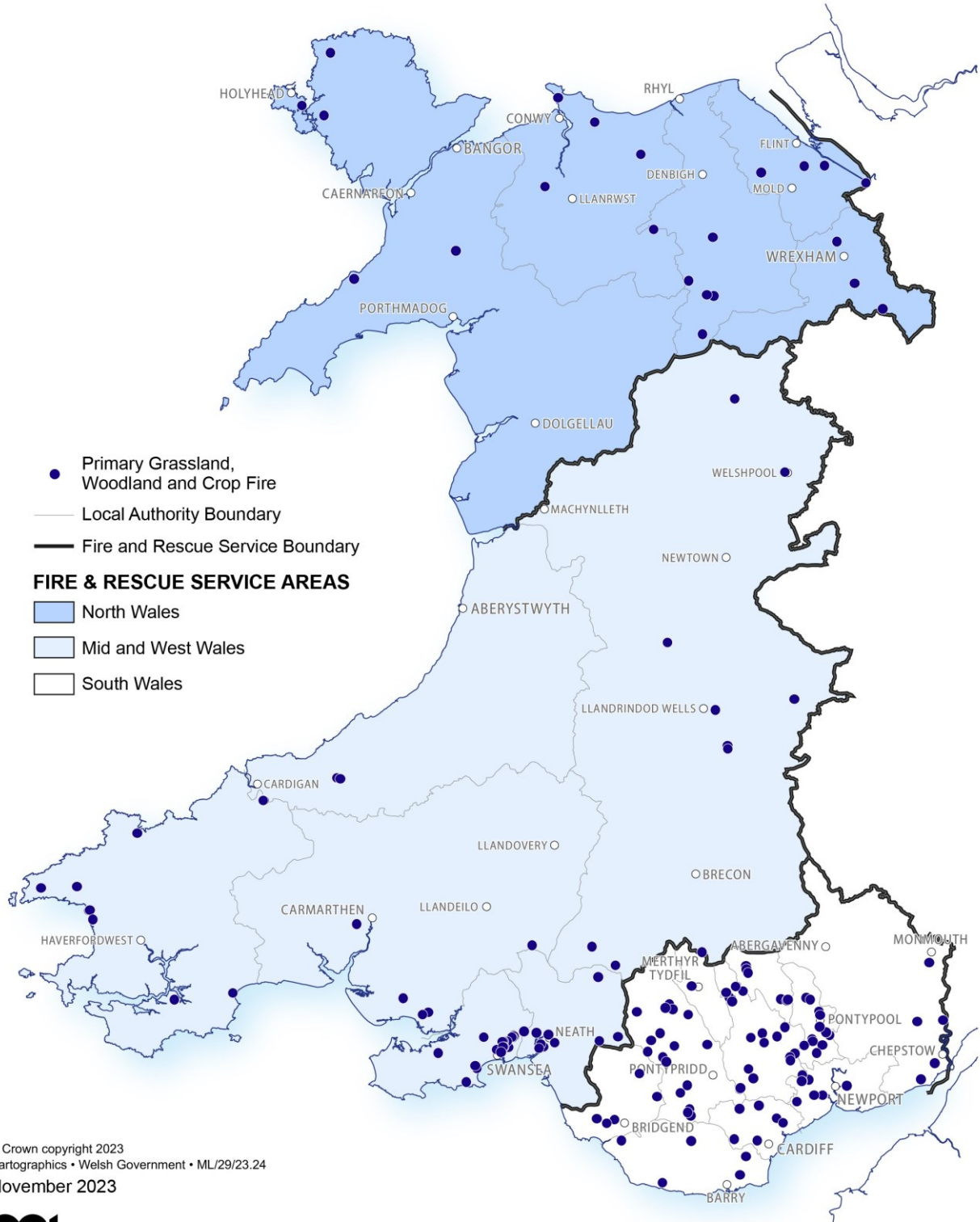
**Table 2: Numbers of primary grassland, woodland and crop fires by Fire and Rescue Authority, 2013-14 to 2022-23[p]**

	North Wales	Mid and West Wales	South Wales	Wales
2013-14	20	25	83	128
2014-15	18	15	51	84
2015-16	20	28	70	118
2016-17	23	12	36	71
2017-18	13	14	41	68
2018-19	16	97	140	253
2019-20	11	44	57	112
2020-21	10	68	102	180
2021-22	14	53	73	140
2022-23[p]	22	64	94	180
Percentage change 2021-22 to 2022-23	57	21	29	29

Description of Table 2: A table showing the number of primary fires occurring on grassland, woodland and crops from 2013-14 to 2022-23. Throughout the time series South Wales FRA have attended the most primary grassland fires each year. Since 2018-19 numbers of primary grassland fires in Mid and West Wales have seen an increase compared to previous years.

[p] Provisional data

**FIGURE 3:  
Grassland, woodland and crop  
primary fires across Wales, 2022-23**



Data mapped above are based on grid references; see the Key Quality Information for further details.



Most single categories of primary grassland fires saw increases, only heathland or moorland saw a decrease.

There were 131 primary fires in woodland (73% of primary grassland fires) in 2022-23.

**Table 3: Number of primary grassland, woodland and crop fires, by location, 2018-19 to 2022-23[p]**

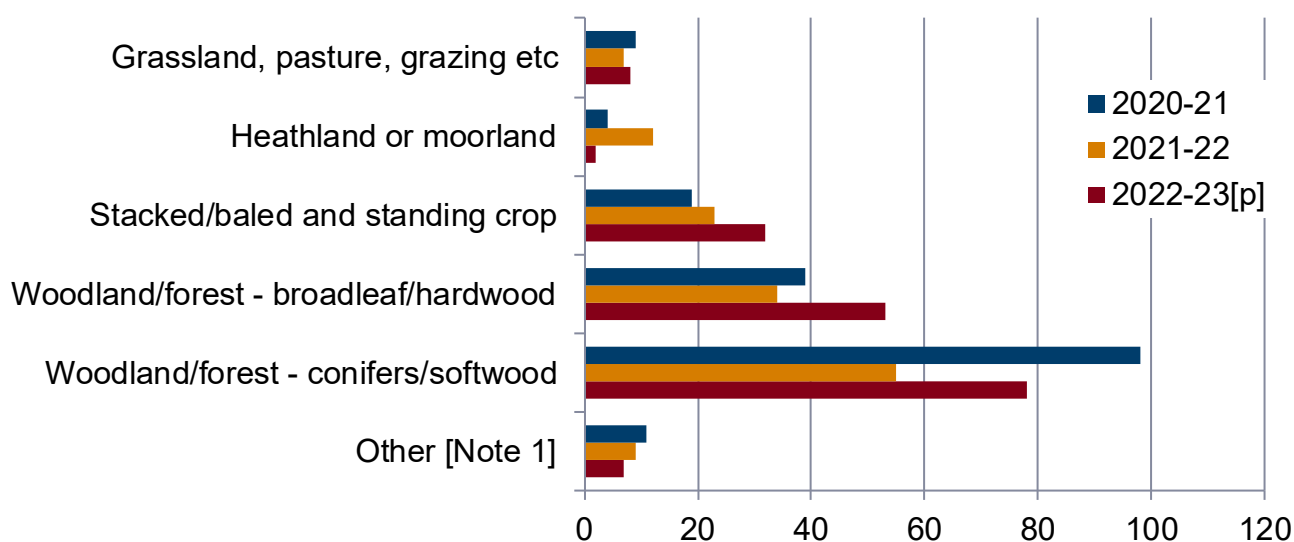
	2018-19	2019-20	2020-21	2021-22	2022-23[p]
Grassland, pasture, grazing etc	10	5	9	7	8
Heathland or moorland	25	4	4	12	2
Stacked/baled and standing crop	24	21	19	23	32
Woodland/forest - broadleaf/hardwood	48	27	39	34	53
Woodland/forest - conifers/softwood	130	49	98	55	78
Other [Note 1]	16	6	11	9	7
<b>All primary grassland, woodland and crop fires</b>	<b>253</b>	<b>112</b>	<b>180</b>	<b>140</b>	<b>180</b>

Description of Table 3: A table showing the number of primary grassland, woodland and crop fires by location type. 'Woodland/forest - conifers/softwood' fires are consistently the largest category of location, with those in 'Woodland/forest - broadleaf/hardwood' the second largest.

[Note 1] Includes domestic gardens, hedge, nurseries and market gardens, roadside vegetation, scrub land and tree scrub.

[p] Provisional data.

**Figure 4: Number of primary grassland, woodland and crop fires, by location, 2020-21 to 2022-23[p]**



Description of Figure 4: a bar chart showing the number of primary grassland, woodland and crop fires by location type. 'Woodland/forest - conifers/softwood' fires are consistently the largest category of location, with those in 'Woodland/forest - broadleaf/hardwood' the second largest.

[Note 1] 'Other' shown in the above chart includes domestic gardens, hedge, nurseries and market gardens, roadside vegetation, scrub land and tree scrub.



[p] Provisional data.

### Secondary grassland, woodland and crop fires

In 2022-23 there were 2,439 secondary grassland, woodland and crop fires in Wales, a rise of 5% compared with 2021-22; [Figure 5](#) shows the locations of these secondary fires. 47% of secondary grassland fires in 2022-23 occurred in the South Wales FRA region, whilst 35% occurred in Mid and West Wales and 18% in North Wales. Only Mid and West Wales saw a decrease (a fall of 11%) compared with 2021-22. There were increases in North Wales (up 25%) and South Wales (up 14%).

It is likely that the number of secondary fires during 2021-22 could have been affected by the restrictions introduced due to the COVID-19 pandemic and comparisons made with this period should be seen in this context. Secondary fires are also affected by weather conditions, further analysis of weather data occurs in the section [Grassland, woodland and crop fires by month](#)

**Table 4: Numbers of secondary grassland, woodland and crop fires by Fire and Rescue Authority, 2013-14 to 2022-23[p]**

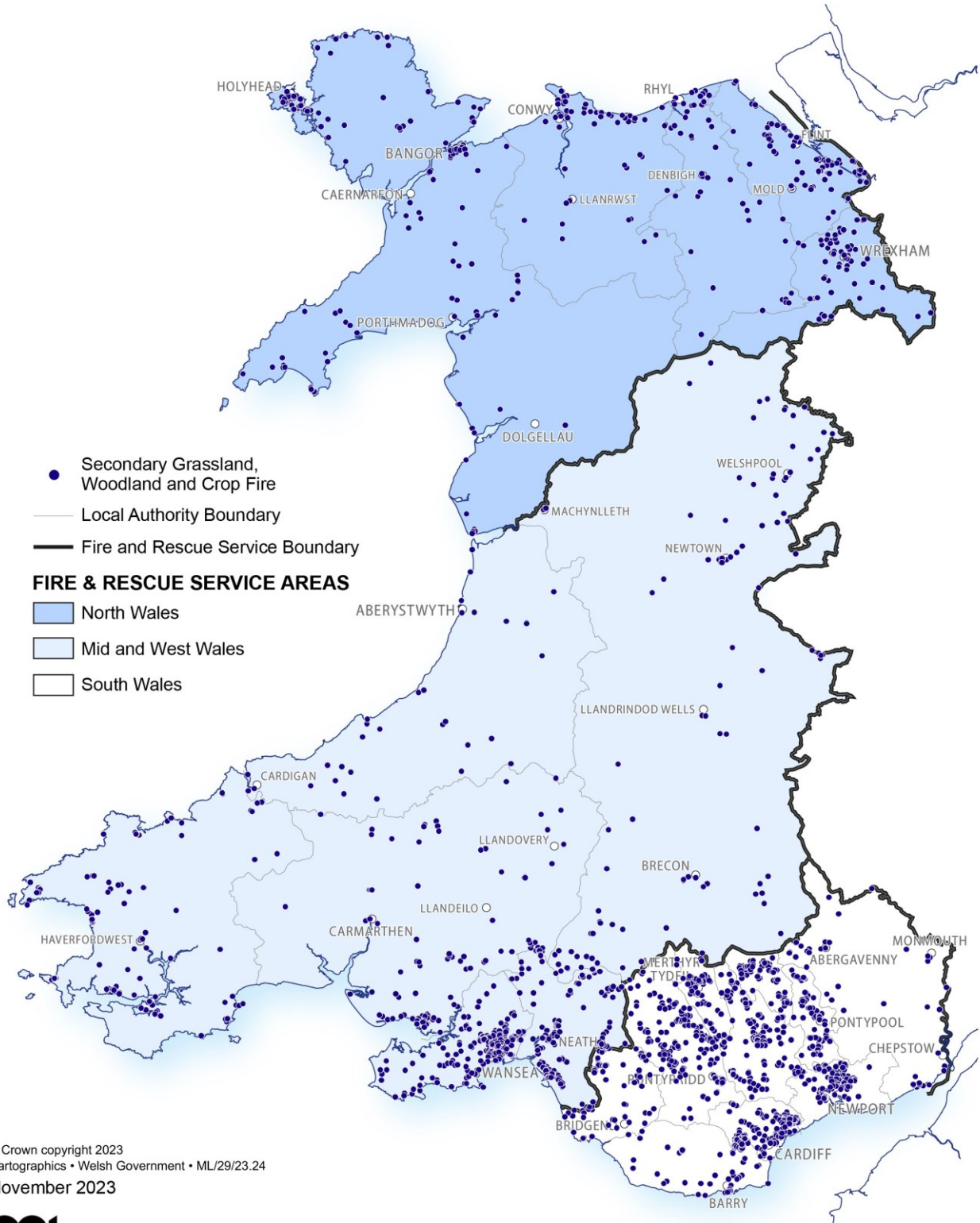
	North Wales	Mid and West Wales	South Wales	Wales
2013-14	460	1,199	2,089	3,748
2014-15	393	835	1,301	2,529
2015-16	426	908	1,763	3,097
2016-17	276	474	895	1,645
2017-18	340	638	1,046	2,024
2018-19	638	1,169	1,954	3,761
2019-20	272	763	1,041	2,076
2020-21	301	798	950	2,049
2021-22[r]	359	959	1,000	2,318
2022-23[p]	450	854	1,135	2,439
Percentage change 2021-22 to 2022-23	25	-11	14	5

Description of Table 4: A table showing a time series of the number of secondary fires occurring on Grassland, woodland or crops from 2013-14 to 2022-23. Throughout the time series South Wales FRA have attended the most secondary grassland fires each year.

[r] Revised data

[p] Provisional data

**FIGURE 5:  
Grassland, woodland and crop  
secondary fires across Wales, 2022-23**



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 November 2023



Data mapped above are based on grid references; see the [Key Quality Information](#) for further details.

The category of secondary grassland, woodland or crop fire which saw the largest percentage increase in 2022-23 compared to 2021-22 was Canal/riverbank vegetation (up 63%) followed by hedges (up 57%). Scrub land saw the largest decrease compared with 2021-22, 64 fewer fires and a 12% fall. In 2022-23, 56% of secondary grassland, woodland and crop fires occurred on either 'grassland, pasture, grazing etc.' or scrub land; these are consistently the two largest categories across the time series, accounting for between 56% and 64% each year since 2009-10.

**Table 5: Number of secondary grassland, woodland and crop fires, by location, 2018-19 to 2022-23[p]**

	2018-19	2019-20	2020-21	2021-22[r]	2022-23[p]
Canal/riverbank vegetation	74	28	50	38	62
Domestic garden (vegetation not equipment)	113	109	146	105	132
Grassland, pasture, grazing etc	1,446	721	688	902	872
Heathland or moorland	495	275	286	292	265
Hedge	184	102	106	108	170
Roadside vegetation	253	94	93	98	133
Scrub land	875	517	451	549	485
Tree scrub	246	179	189	185	267
Other [Note 1]	75	51	40	41	53
<b>All secondary grassland, woodland and crop fires</b>	<b>3,761</b>	<b>2,076</b>	<b>2,049</b>	<b>2,318</b>	<b>2,439</b>

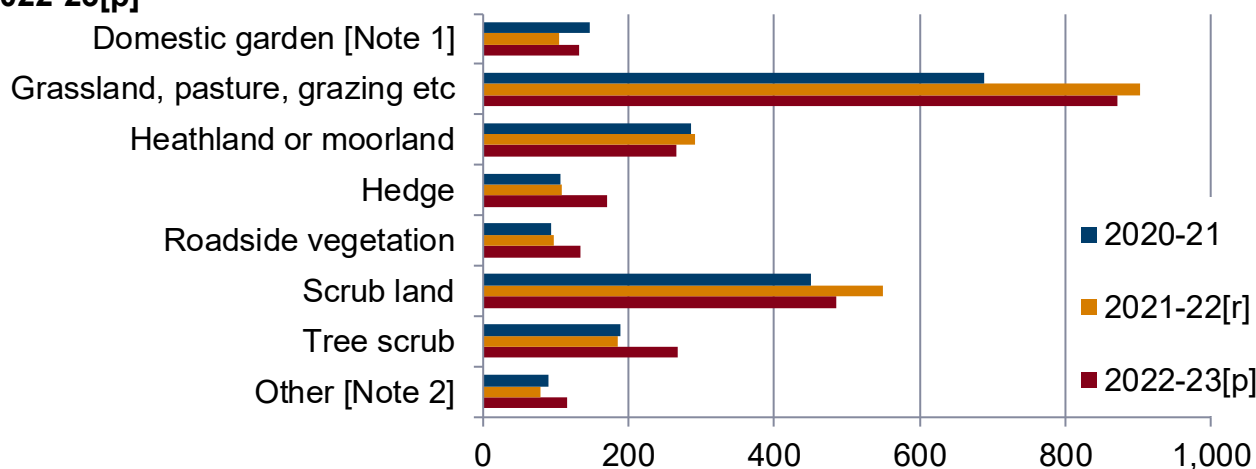
Description of Table 5: A table showing a time series of the number of secondary grassland woodland or crop fires, by location type.

[Note 1] includes nurseries, market gardens, stacked/baled crop, woodland/forest - broadleaf/hardwood, woodland/forest - conifers/softwood, railway trackside vegetation and straw/stubble burning.

[r] Revised data

[p] Provisional data.

**Figure 6: Number of secondary grassland, woodland and crop fires, by location, 2020-21 to 2022-23[p]**



Description of Figure 6: A bar chart showing the number of secondary grassland woodland or crop fires in 2020-21, 2021-22 and 2022-23, by location type. The chart highlights how each year the largest categories of secondary fires are those in 'grassland, pasture and grazing' and 'scrub land'.

[Note 1] Vegetation not equipment.

[Note 2] 'Other' as shown in the above chart includes 'woodland/forest - broadleaf/hardwood', 'woodland/forest - conifers/softwood', 'nurseries and market garden', 'stacked and baled crop', canal/riverbank vegetation, railway trackside vegetation and straw/stubble burning.

[r] Revised data

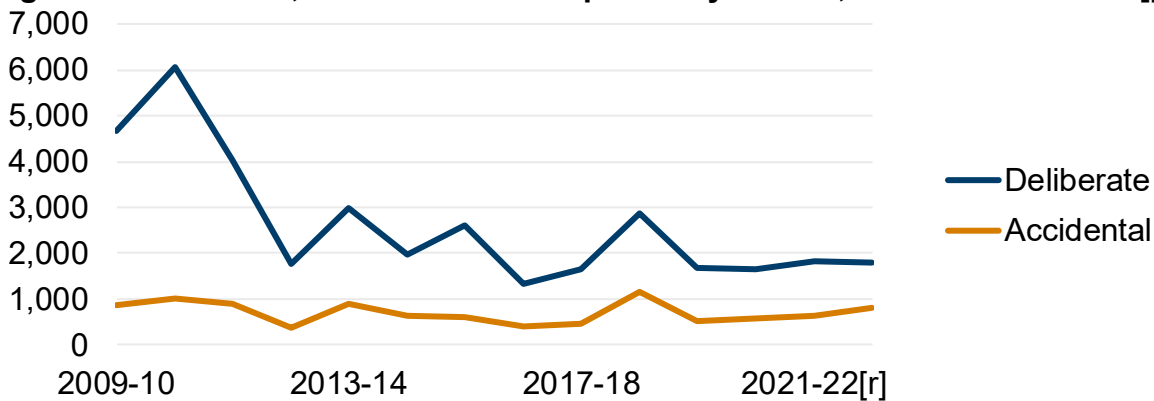
[p] Provisional data.

### Grassland, woodland and crop fires by motive

Since the introduction of the Incident Recording System (IRS) in April 2009 for collecting FRA incident data, greater detail relating to secondary fires has been recorded. This allows us to show a time series by motive from this date for all grassland, woodland and crop fires where previously only data for primary fires were available.

The chart below illustrates how much more fluctuation there is in the time series for deliberate fires than accidental fires. However, we can also note that peaks and troughs, while less marked in the accidental time series, often mirror those in the deliberate fires time series. This could imply the effects of the weather, land management strategies and fire prevention work on all grassland fires.

**Figure 7: Grassland, woodland and crop fires by motive, 2009-10 to 2022-23[p]**



Description of Figure 7: A line chart shows a time series of all grassland fires, split by motive. The time series starts in 2009-10 and the 2022-23 data are currently provisional. From the chart we see the deliberate fire time series is far more volatile than that for accidental fires.

[r] Revised data

[p] Provisional data for 2022-23.

69% of grassland, woodland and crop fires were deliberate in 2022-23, the lowest proportion in the time series (from 2009-10). Numbers of deliberate grassland fires fell by 1% compared with 2021-22 (from 1,819 to 1,805 fires), whilst numbers of accidental grassland fires rose by 27% (from 639 to 814).

For both deliberate and accidental fires occurring on grassland, woodland and crops, the vast majority were secondary fires; 94% of deliberate grassland fires and 91% of accidental grassland fires were secondary.

**Table 6: Number and percentage of grassland, woodland and crop fires, by motive, 2018-19 to 2022-23[p]**

	Deliberate	Accidental	All	Deliberate %	Accidental %
<b>Primary fires</b>					
2018-19	176	71	253	70	28
2019-20	81	31	112	72	28
2020-21	123	57	180	69	31
2021-22	99	41	140	71	29
2022-23[p]	106	74	180	59	41
<b>Secondary fires</b>					
2018-19	2,686	1,075	3,761	71	29
2019-20	1,604	472	2,076	77	23
2020-21	1,520	529	2,049	74	26
2021-22[r]	1,720	598	2,318	74	26
2022-23[p]	1,699	740	2,439	70	30
<b>All fires</b>					
2018-19	2,862	1,152	4,014	71	29
2019-20	1,685	503	2,188	77	23
2020-21	1,643	586	2,229	74	26
2021-22[r]	1,819	639	2,458	74	26
2022-23[p]	1,805	814	2,619	69	31

Description of Table 6: A table showing the number of grassland, woodland and crop fires, split by primary and secondary fires. The table also shows the proportions of these fires which were deliberate and accidental.

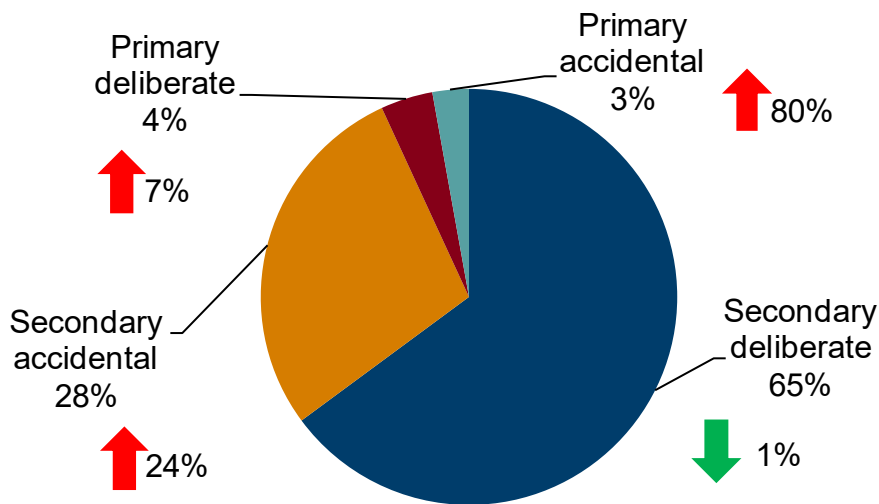
[r] Revised data

[p] Provisional data.

Deliberate secondary grassland, woodland and crop fires made up 65% of all grassland woodland and crop fires in 2022-23.

Secondary accidental grassland fires made up 28% of all grassland, woodland and crop fires in 2022-23; an increase of 24% from 2021-22.

**Figure 8: Grassland, woodland and crop fires by fire type and motive, 2022-23[p]**



Description of Figure 8: A pie chart showing the proportion of grassland fires which are ‘primary and deliberate’, ‘primary and accidental’, ‘secondary and deliberate’ and ‘secondary and accidental’. The largest category in the pie chart is for secondary deliberate fires, which make up 65% of grassland, woodland and crop fires. The arrows within the pie chart are the percentage change compared to the previous year, where the number of primary accidental, primary deliberate and secondary accidental fires saw an increase compared with 2021-22, whilst numbers of secondary deliberate fires fell.

Of the 814 accidental (primary and secondary) grassland, woodland and crop fires in 2022-23, 32% occurred on grassland, pasture, grazing etc. and 17% on heathland and moorland.

There were 1,805 deliberate (primary and secondary) grassland, woodland and crop fires in 2022-23, 34% of which occurred on grassland, pasture, grazing etc. and 22% on scrub land.

### **Grassland, woodland and crop fires by month**

The majority of grassland, woodland and crop fires take place in the spring and summer months. August 2022 recorded the highest proportion (25%) of grassland fires for the financial year 2022-23 and increased to more than 6 times the number in August 2021.

April 2022 saw 21% of the grassland fires in 2022-23 but decreased by 32% compared with April 2021.

18% of grassland fires in 2022-23 occurred in July 2022, increasing to 473 from 202 in July 2021.

**Table 7: Number and percentage of grassland, woodland and crop fires, by month, 2020-21 to 2022-23[p]**

	2020-21	2021-22[r]	2022-23[p]	2020-21 %	2021-22 %	2022-23 %
April	748	823	557	34	33	21
May	545	102	206	24	4	8
June	220	200	232	10	8	9
July	73	202	473	3	8	18
August	110	107	662	5	4	25
September	89	144	187	4	6	7
October	25	38	48	1	2	2
November	36	35	23	2	1	1
December	14	19	18	1	1	1
January	9	36	17	0	1	1
February	69	54	114	3	2	4
March	291	698	82	13	28	3
<b>Total fires</b>	<b>2,229</b>	<b>2,458</b>	<b>2,619</b>	<b>100</b>	<b>100</b>	<b>100</b>

Description of Table 7: A table showing the number of grassland, woodland and crop fires occurring each month in 2020-21, 2021-22 and 2022-23. The table also shows the percentage of total fires for these financial years which occurred in each month.

[r] Revised data

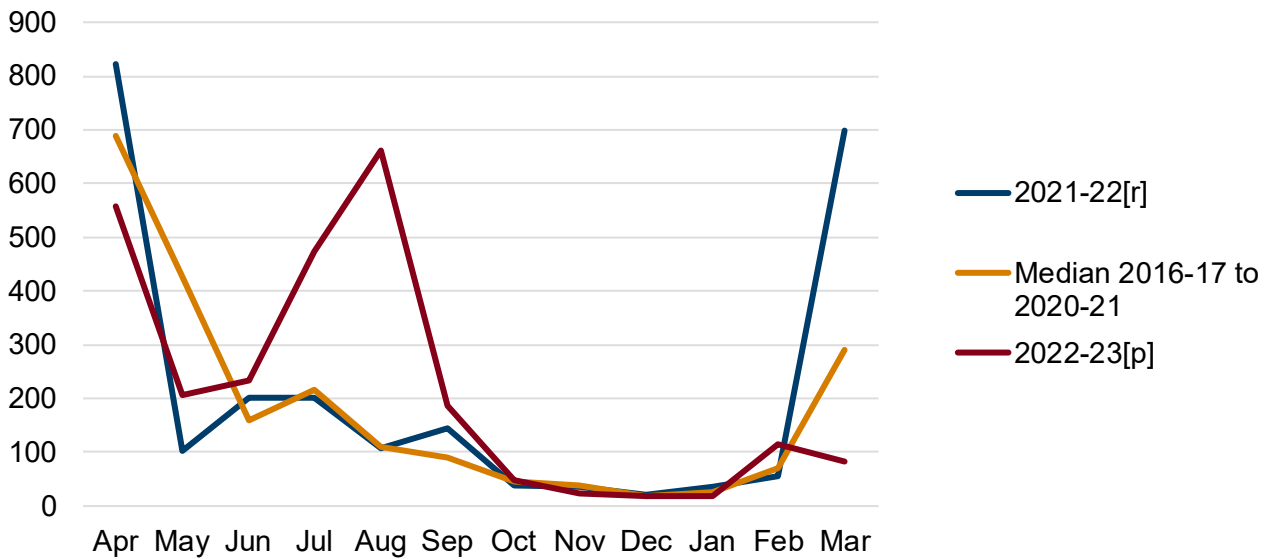
[p] Provisional data.

Aside from August 2022 and July 2022, another 5 months in 2022-23 saw increases in numbers of grassland, woodland and crop fires compared with the previous year. The next largest percentage increases were seen in February 2023 and May 2022, each seeing more than double the number in the same months in the previous year. The remaining months seeing an increase were June 2022 (up 16%), September (up 30%) and October (up 26%)

The largest decrease (in percentage and numbers) was seen in March 2023 when numbers fell by 88%, equating to 616 fewer fires compared with March 2022, though it should be noted that numbers in March 2022 were particularly high.



**Figure 9: Number of grassland, woodland and crop fires, by month, 2016-17 to 2020-21 median, 2021-22 and 2022-23[p]**



Description of Figure 9: A line chart showing grassland fire data by month for 2021-22, 2022-23 and the median of the years 2016-17 to 2020-21. The chart highlights the unusual pattern seen in 2022-23, with very high numbers in July and August (in comparison with the median and the previous year) and very low numbers in March 2023.

[r] Revised data.

[p] Provisional data.

The occurrence of outdoor fires is likely to be influenced by the weather. Data from the Met Office shows that in 2022-23, August 2022 had the most sunshine, the second least rainfall and had the most fires. This is only the second time in the last 10 years that a month other than April had the most grassland fires. The other exception was 2018-19 when there was a large number of fires in July. The Met Office have produced a [factsheet explaining further the links between weather and the occurrence of grassland fires](#).

March 2023 saw the second fewest number of grassland fires for March in the time series (from 2009-10). This month also saw 60% fewer hours of sunshine compared with March 2022 and was the wettest March since 1981.

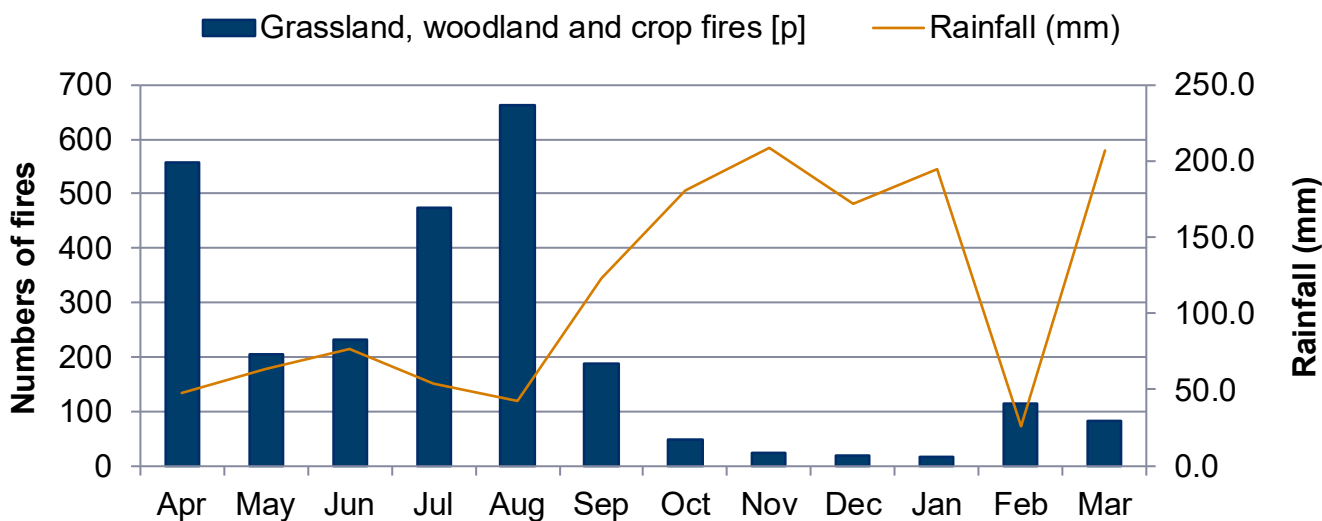
August 2022 saw the largest increase in numbers, with 555 more fires than in August 2021, over the same period rainfall decreased by 45% and there were over 80% more hours of sunshine compared with August 2021.

However, weather data cannot explain all the fluctuations, and this may be due to the weather data not being detailed enough (either by time or geography) but there may also be other factors influencing the numbers of fires.

It should be noted that other weather conditions such as snow and ice may also affect the number of fires in the winter.

[Weather data are available from the Met Office.](#)

**Figure 10: Number of grassland, woodland and crop fires and rainfall levels, by month, 2022-23**

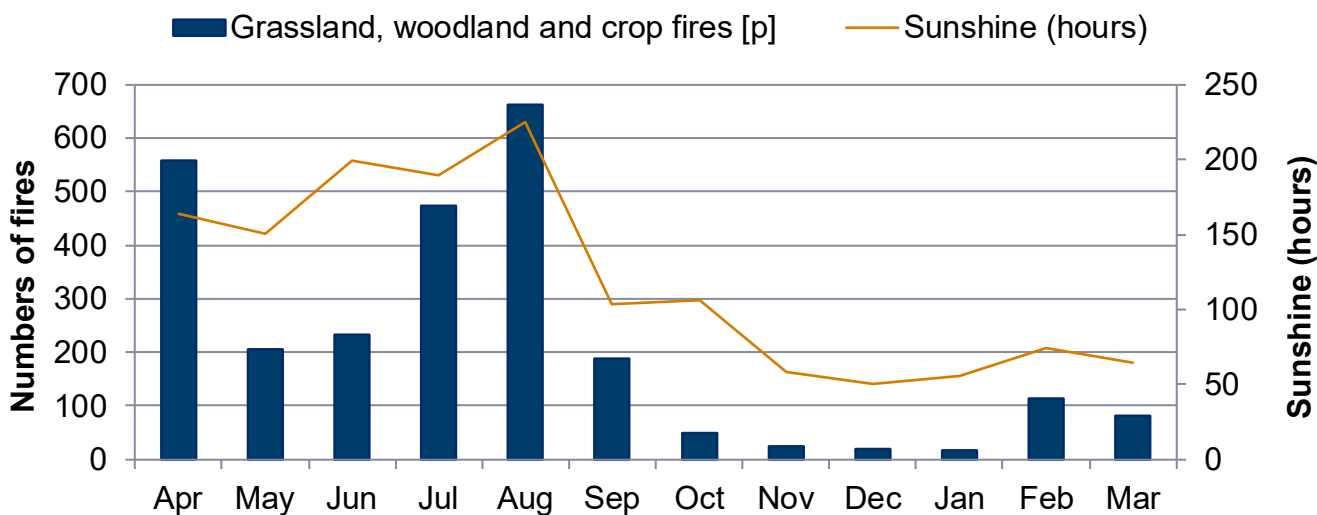


Description of Figure 10: A column chart showing the number of grassland, woodland and crop fires occurring each month in 2022-23, plotted against a line chart of the monthly levels of rainfall (in millimetres) over the same time period. The data indicate that the most fires occurred in spring and summer months when rainfall was relatively low.

Source: Incident Recording System, Met Office

[p] Provisional data

**Figure 11: Numbers of grassland, woodland and crop fires and hours of sunshine, by month, 2022-23**



Description of Figure 11: A column chart showing the number of grassland, woodland and crop fires occurring each month in 2022-23, plotted against a line chart of the monthly levels of sunshine (in hours) over the same time period. The data indicate that the most fires occurred in spring and summer months when there were most hours of sunshine.

Source: Incident Recording System, Met Office

[p] Provisional data

## Fires by Fire and Rescue Authority and Local Authority

**Table 8: Number and percentage of grassland, woodland and crop fires, by Fire and Rescue Authority, 2013-14 to 2022-23**

	North Wales	Mid and West Wales	South Wales	% in North Wales	% in Mid and West Wales	% in South Wales
2013-14	480	1,224	2,172	12	32	56
2014-15	411	850	1,352	16	33	52
2015-16	446	936	1,833	14	29	57
2016-17	299	486	931	17	28	54
2017-18	353	652	1,087	17	31	52
2018-19	654	1,266	2,094	16	32	52
2019-20	283	807	1,098	13	37	50
2020-21	311	866	1,052	14	39	47
2021-22[r]	373	1,012	1,073	15	41	44
2022-23[p]	472	918	1,229	18	35	47
Percentage change 2021-22 to 2022-23	27	-9	15	[x]	[x]	[x]

Description of Table 8: A table showing the number and corresponding percentage of grassland, woodland and crop fires in each fire and rescue authority each year. The table also gives the percentage change in 2022-23 compared with the 2021-22. The number of grassland, woodland and crop fires increased in North Wales (up 27%) and in South Wales (up 15%) in 2022-23 compared with 2021-22. In Mid and West Wales numbers fell by 9% compared with 2021-22.

[r] Revised data

[p] Provisional data.

[x] Not applicable

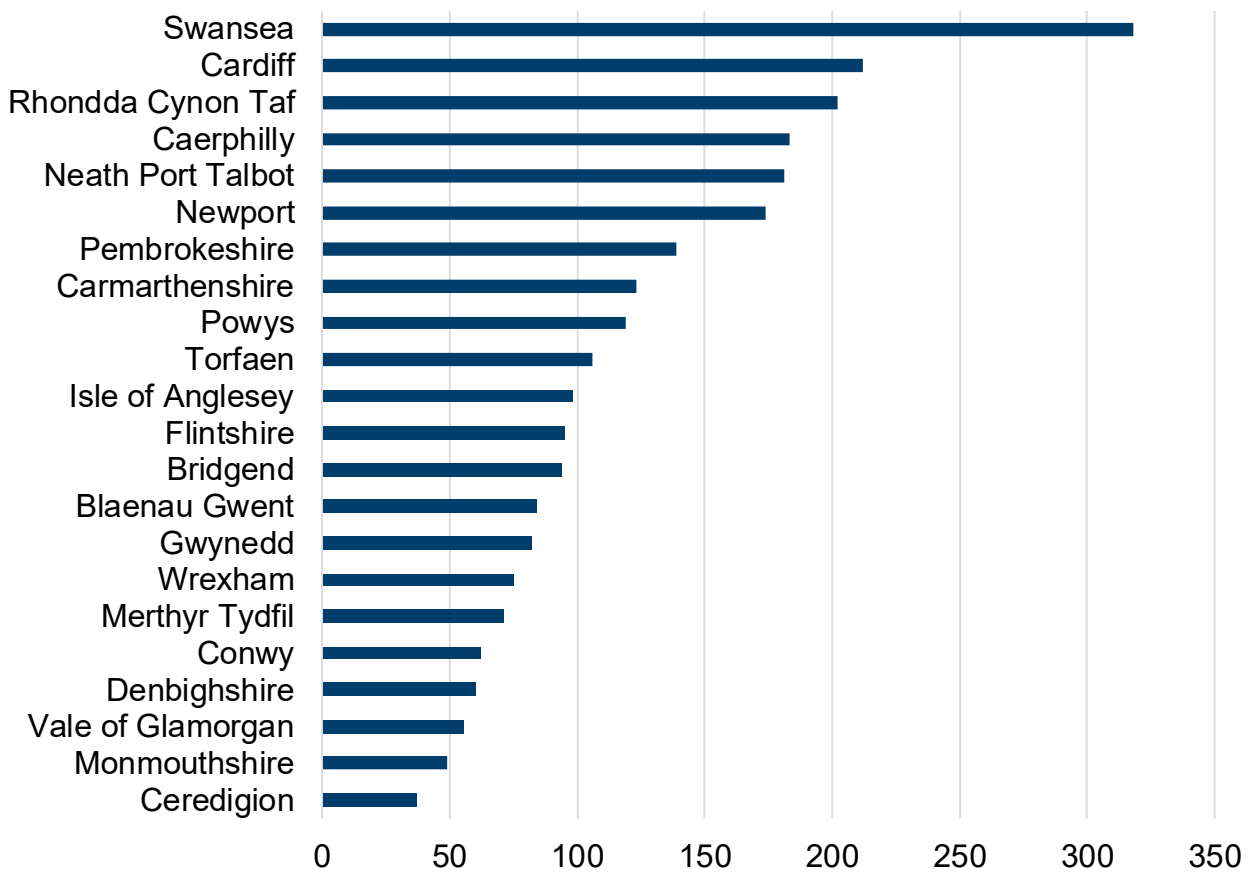
Swansea local authority had the highest number of grassland, woodland and crop fires in Wales in 2022-23 with 318 (equating to 12% of the grassland fires in Wales). Cardiff and Rhondda Cynon Taf each had 8% of grassland, woodland and crop fires in Wales in 2022-23. Ceredigion had the smallest number with 37 (1% of those in Wales), closely followed by Monmouthshire with 49 fires.

12 local authorities saw an increase in the number of grassland, woodland and crop fires in 2022-23 (compared with 2021-22); the largest percentage increases were in Isle of Anglesey (up 216%), Newport (up 129%) and Torfaen (up 112%).

The local authorities with the largest decreases were Gwynedd (down 42%) and Merthyr Tydfil (down 41%).

Compared with 2010-11 (the peak in the time series), all but 3 local authorities have seen decreases: Isle of Anglesey (up 2%), Denbighshire (up 2%) and Pembrokeshire (up 45%). 9 Local authorities saw decreases of 50% or more.

**Figure 12: Number of grassland, woodland and crop fires, by Fire and Rescue Authority and Local Authority 2022-23[p] [Note 1]**



Description of Figure 12: A bar chart showing the numbers of grassland, woodland and crop fires by local authority in 2022-23.

The chart highlights those LAs with the most grassland fires (Swansea, Cardiff and Rhondda Cynon Taf) and shows the relatively low numbers throughout North Wales.

[Note 1] Local authorities have been assigned to incidents based on grid references; see the Key Quality Information for further details. Local Authority data are available on [StatsWales](https://stats.wales.gov.uk/).

[p] Provisional data.

In 19 local authorities, ‘grassland and pasture’ was the largest category of location of grassland, woodland and crop fires in 2022-23. The remaining 3 local authorities were Isle of Anglesey (where 49% occurred on heathland), Gwynedd (52% occurring on heathland) and Rhondda Cynon Taff (where 45% occurred on scrub land).

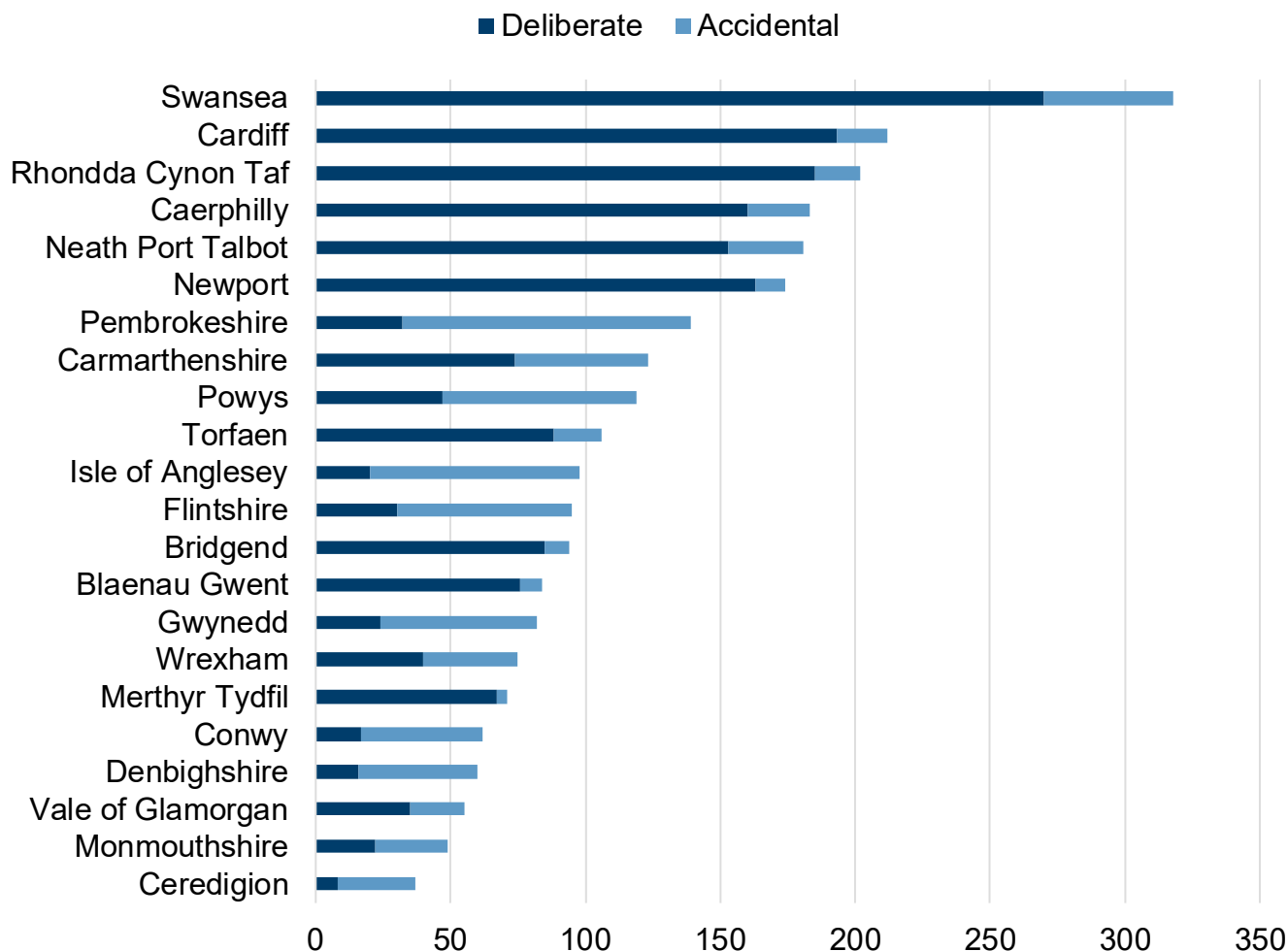
**Deliberate fires by local authority:** 8 local authorities saw an increase in the number of deliberate grassland, woodland and crop fires in 2022-23 compared with 2021-22. The largest percentage increases were seen in Newport (up 133%) and Torfaen (up 126%).

14 local authorities saw decreases in deliberate grassland fires, the largest percentage decrease was in the Merthyr Tydfil (down 43%).

1 local authority (Ceredigion) saw no percentage change.

All local authorities in Wales have seen decreases in deliberate grassland fires compared with 2010-11 (the peak in the timeseries), the largest percentage changes being in Gwynedd (down 86%), Rhondda Cynon Taff (down 85%) and Merthyr Tydfil (down 82%).

**Figure 13: Numbers of grassland, woodland and crop fires by local authority and motive, 2022-23[p] [Note 1]**



Description of Figure 13: A bar chart showing the numbers of grassland fires which were accidental, and which were deliberate for LAs in 2022-23. The chart illustrates how LAs in North Wales tend to have a higher proportion of accidental fires whilst those in South Wales have a higher proportion of deliberate fires.

[Note 1] Local authorities have been assigned to incidents based on grid references; see the Key Quality Information for further details.

[p] Provisional data.

In 6 local authorities, over 90% of all grassland, woodland and crop fires were started deliberately, all being in the South Wales FRA region. The local authorities where the highest proportions of grassland, woodland and crop fires started deliberately occurred were Merthyr Tydfil (94%) and Newport (94%).

Isle of Anglesey and Ceredigion had the smallest percentages of grassland fires started deliberately (20% and 22% respectively). In 2022-23 Pembrokeshire had the most accidental grassland fires in Wales, making up 13% of the accidental grassland fires in Wales.

### Fire false alarms

Data on fire false alarms on grassland, woodland and crops became available with the introduction of IRS in April 2009.

There was a fall of 5% in the number of grassland, woodland and crop related fire false alarms attended by FRAs in 2022-23 (compared with 2021-22). Only South Wales saw an increase in numbers (up 5%); Mid and West Wales saw a fall of 12% whilst in North Wales there was a decrease of 10%.

Only 1% of these fire false alarms in 2022-23 were due to malicious calls, with the remaining 99% due to good intent. All malicious calls relating to grassland, woodland and crops occurred in South Wales, which in turn equated to 3% of the grassland, woodland and crop fire false alarms attended in the region.

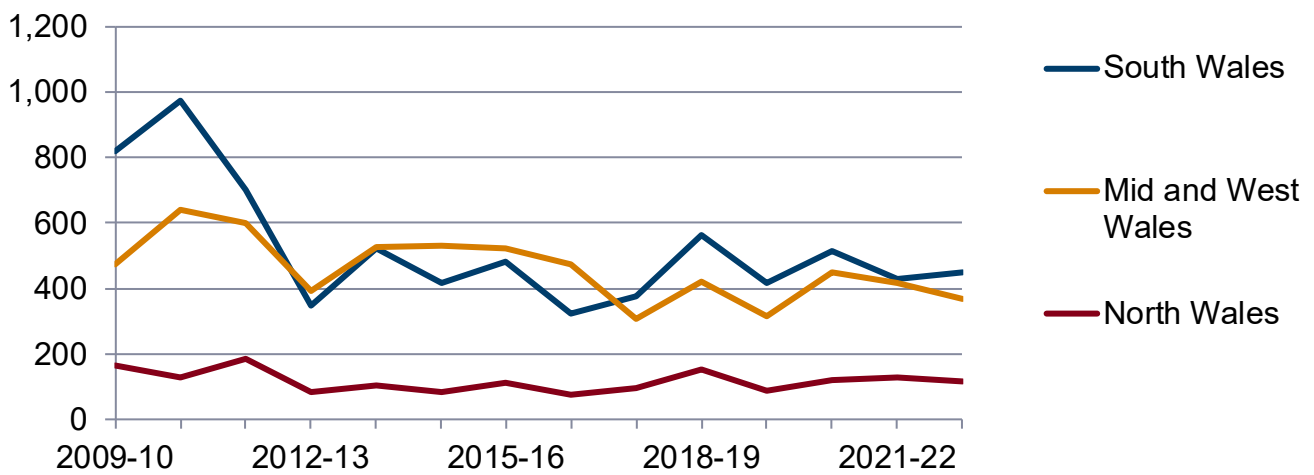
**Table 9: Number of grassland, woodland and crop fire false alarms, by Fire and Rescue Authority, 2013-14 to 2022-23[p]**

	North Wales	Mid and West Wales	South Wales	Wales
2013-14	105	528	523	1,156
2014-15	81	531	416	1,028
2015-16	112	521	480	1,113
2016-17	76	475	321	872
2017-18	96	306	376	778
2018-19	153	421	565	1,139
2019-20	89	316	416	821
2020-21	121	450	513	1,084
2021-22	127	418	427	972
2022-23[p]	114	366	448	928
Percentage change 2021-22 to 2022-23	-10	-12	5	-5

Description of Table 9: A table showing the numbers of fire false alarms related to grassland, woodland and crop locations, by fire and rescue authority. Since 2017-18, the majority of grassland, woodland and crop fire false alarms have occurred in South Wales and the fewest in North Wales.

[p] Provisional data

**Figure 14: Number of grassland, woodland and crop related fire false alarms, by Fire and Rescue Authority 2009-10 to 2022-23[p]**



Description Figure 14: A line chart showing the number of grassland, woodland and crop related fire false alarms, for each fire and rescue authority.

The chart highlights the relatively low numbers in North Wales, which are consistently far lower than South Wales and Mid and West Wales.

[p] Provisional data for 2022-23.



## Section 2: Casualties from grassland, woodland and crop fires

Since 2011-12 there have been fewer than 10 casualties each year resulting from grassland, woodland and crop fires.

There has been one fatal casualty in a grassland, woodland and crop fire since 2001-02, which occurred in 2007-08. Since 2001-02 there have been 113 non-fatal casualties in these fires; 43% of the injuries incurred were burns and 33% were sent for precautionary checks.

Data on rescues from fires became available with the introduction of IRS in April 2009. Since then, there have been 2 rescues of an uninjured person from a grassland, woodland or crop fire, 1 in 2010-11 and 1 in 2015-16.

There were 4 non-fatal casualties in a grassland, woodland and crop fires in 2022-23, 1 more than in 2021-22, although numbers tend to be small and are prone to fluctuation. These 4 casualties equate to less than 1% of all non-fatal fire casualties in Wales in 2022-23.

Over the last 10 years 32% of non-fatal grassland, woodland and crop fire casualties were the result of fires which were started deliberately.

During this same time period, 42% of grassland, woodland and crop related casualties occurred in Mid and West Wales, 42% in South Wales and 16% in North Wales.

**Table 10: Number of casualties and rescues from grassland, woodland and crop fires, 2013-14 to 2022-23**

	Fatalities	Non-fatal casualties	Rescues (no injury)
2013-14	0	1	0
2014-15	0	6	0
2015-16	0	6	1
2016-17	0	2	0
2017-18	0	5	0
2018-19	0	2	0
2019-20	0	6	0
2020-21	0	3	0
2021-22	0	3	0
2022-23[p]	0	4	0

Description of Table 10: A table showing the number of grassland, woodland and crop related fatalities, non-fatal casualties and non-injured rescued people.

Numbers of casualties are low, and a trend is difficult to determine.

[p] Provisional data.

### Section 3: Area of damage caused by grassland, woodland and crop fires

Fires are classified according to the size of area damaged in the course of a fire. In 2022-23, 53% of primary grassland, woodland and crop fires in Wales damaged 20 square metres or less. A further 29% damaged over 200 square metres. All size categories of primary fires saw increases.

For secondary fires, the majority (69%) damaged 20 square metres or less. A fifth of secondary fires damaged between 21 and 200 square metres and 12% damaged an area over 200 square metres.

Overall, the number of grassland, woodland and crop fires in 2022-23 in each category of area damaged varied; those which damaged less than 20 square metres increased in number by 21%. The number of fires damaging 21 to 200 square metres rose by 11% whilst the number damaging more than 200 squares saw fell by 37%.

**Table 11: Number and percentage of grassland woodland and crop fires by area damaged, 2020-21 to 2022-23[p]**

	2020-21	2021-22[r]	2022-23[p]	2020-21 %	2021-22 %	2022-23 %
<b>Primary fires</b>						
0-20 sq m	89	86	95	49	61	53
21-200 sq m	29	17	33	16	12	18
201+ sq m	62	37	52	34	26	29
<b>Total</b>	<b>180</b>	<b>140</b>	<b>180</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Secondary fires</b>						
0-20 sq m	1,210	1,374	1,675	59	59	69
21-200 sq m	466	444	478	23	19	20
201+ sq m	373	500	286	18	22	12
<b>Total</b>	<b>2,049</b>	<b>2,318</b>	<b>2,439</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>All fires</b>						
0-20 sq m	1,299	1,460	1,770	58	59	68
21-200 sq m	495	461	511	22	19	20
201+ sq m	435	537	338	20	22	13
<b>Total</b>	<b>2,229</b>	<b>2,458</b>	<b>2,619</b>	<b>100</b>	<b>100</b>	<b>100</b>

Description of Table 11: A table showing the number of grassland, woodland and crop fires, split by primary/secondary and size of area damaged. The table also shows the percentages of fires in each category of fire size for primary and secondary fires.

[r] Revised data.

[p] Provisional data

In 2022-23, 82 grassland, woodland and crop fires took place on National Park land; 91% of these were secondary fires. Over the last 10 years there have been 703 grassland, woodland and crop fires on National Park land, equating to 3% of all grassland, woodland and crop fires.

Where a cause of rapid fire growth was recorded, strong winds was the reason in 9% of primary grassland, woodland and crop fires in 2022-23. Comparative data for secondary fires is not available. Over the last 10 years, 45% of primary fires where strong winds were a factor damaged over 10,000 square metres.

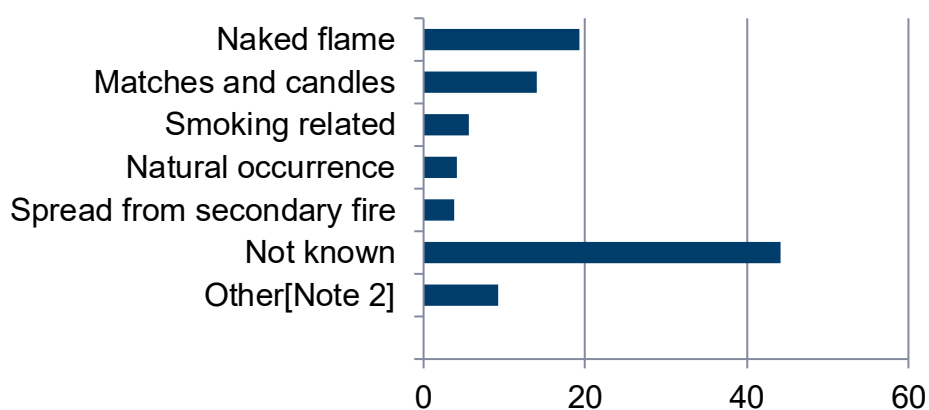
## Section 4: Source of ignition and cause of grassland, woodland and crop fires

Information is available on the source of primary fires, but not secondary fires. Figure 15 looks at the source of the flame, spark or heat that first ignited the fire. This differs from the cause of the fire, which refers to why the fire started, for instance deliberate (not shown in figure 16), careless handling, overheating or natural causes (which are classed as accidental causes).

In 19% of the primary grassland fires over the last 5 years the source of ignition was a naked flame and a further 14% were due to matches and candles. In 44% of primary grassland fires in the last 5 years, the source was unknown.

In 2022-23 numbers of grassland primary fires caused by naked flames increased by 36% compared to 2021-22, and those where the source was unknown rose by 7%.

**Figure 15: Percentage of primary grassland, woodland and crop fires by source of ignition, 2018-19 to 2022-23 (aggregated) [Note 1]**



Description of Figure 15: A bar chart showing the source of ignition of primary grassland, woodland and crop fires.

Most fires in this time period were started with a naked flame or matches/candles (for those fires where the source is known).

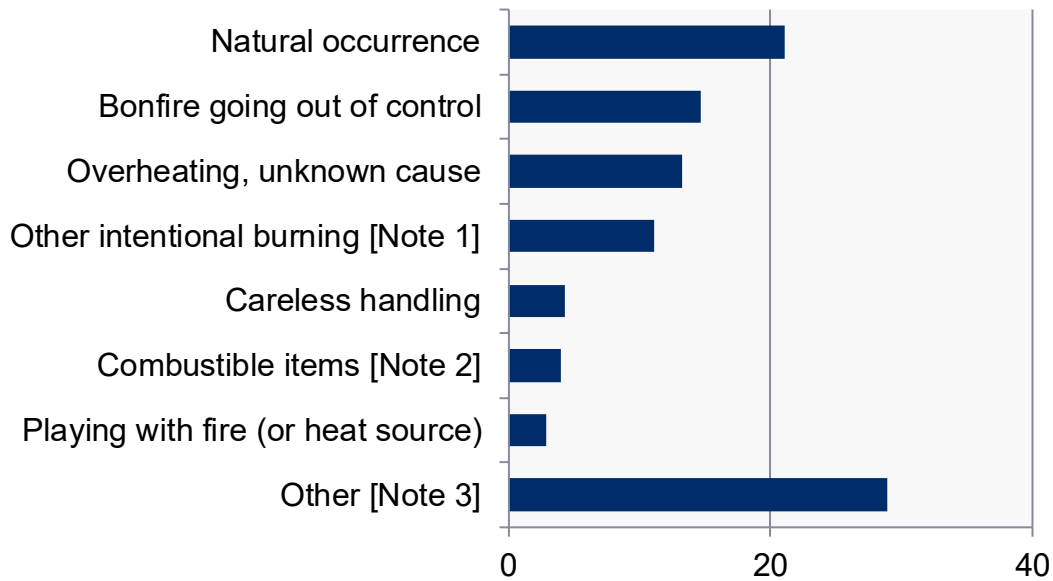
[Note 1] Accidental and deliberate grassland fires.

[Note 2] Includes bombs and explosives, fireworks, fuel/chemical, other, wet hay, cooking appliance, vehicles and other domestic style appliance.

Deliberate primary fires: As may be expected, for most deliberate fires over the last 5 years (2018-19 to 2022-23) the source of ignition was a naked flame (26%) or matches and candles (18%). A further 6% were started with smokers' materials. In 45% of deliberate fires the source was unknown.

Accidental primary fires: The sources of accidental fires over the same period are more varied; 12% occurred naturally, 11% spread from secondary fires and 6% started with a naked flame. In 42% of accidental fires the source was unknown.

**Figure 16: Percentage of accidental primary grassland, woodland and crop fires, by main cause, 2018-19 to 2022-23 (aggregated)**



Description Figure 16: A bar chart showing the number of accidental primary grassland, woodland and crop fires and their cause, aggregated for the last 5 years.

A large proportion of accidental fires occurred naturally, but the category shown in the chart as 'Other' is the largest (29%), this category is a summation of a number of smaller categories.

[Note 1] Going out of control

[Note 2] Being placed too close to heat source or fire

[Note 3] Other in the above chart includes 'Not applicable', 'Fault in equipment or appliance', 'Faulty fuel supply', 'Negligent use of equipment or appliance (heat source)', 'Accumulation of flammable material', and 'Person too close to heat source (or fire).

The causes of accidental primary grassland, woodland and crop fires are also varied.

In the last 5 years, 27% of accidental primary grassland, woodland and crop fires were determined to have been caused naturally and 19% were due to bonfires going out of control.

## Section 5: Additional analysis - Calendar year data

This analysis has been included as we are aware that users often refer to data on the situation in the calendar year rather than the financial year, and also to question the impact of the Easter break on the patterns seen.

For much of the time series there has been a regular peak in grassland, woodland and crop fires in April (beginning of the financial year) and March (end of the financial year), which *may* be linked to the timing of Easter. Analysis of calendar year data can be useful, as this limits periods of Easter in a year to one and also to show the peak period for fires as a continuous time.

Numbers of grassland, woodland and crop fires and fire false alarms rose by 47% in 2022 (compared with 2021); numbers of fires rose by 57% and fire false alarms saw an increase of 24%.

In 2022 the number of primary grassland fires rose by 83% compared with 2021, whilst numbers of secondary fires rose by 55% compared with 2021.

**Table 12: Numbers of fires and fire false alarms and numbers which are grassland, woodland and crop related – calendar years 2017 to 2022[p]**

	2017	2018	2019	2020	2021[r]	2022[p]
Primary	4,356	4,459	4,212	3,924	3,844	3,993
of which grassland [Note 1]	77	244	106	191	115	210
Secondary	6,467	7,616	6,278	6,079	5,980	7,680
of which grassland [Note 1]	2,133	3,494	2,173	2,084	1,924	2,984
Total fires [Note 2]	11,235	12,433	10,844	10,319	10,156	11,956
of which grassland [Note 1]	2,210	3,738	2,279	2,275	2,039	3,194
Fire false alarms	14,077	14,485	14,243	14,765	14,968	16,013
of which grassland [Note 1]	851	1,057	852	1,069	859	1,067
All fires and fire false alarms	25,312	26,918	25,087	25,084	25,124	27,969
of which grassland [Note 1]	3,061	4,795	3,131	3,344	2,898	4,261

Description of Table 12: A table showing the number of primary fires, secondary fires and fire false alarms in calendar years. It also shows the number of these related to grassland, woodland and crop locations.

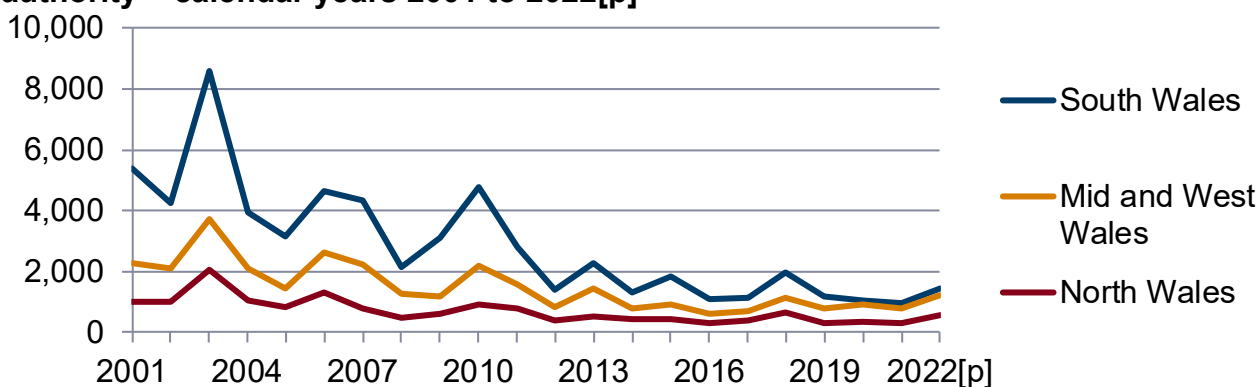
[Note 1] Grassland, woodland and crops

[Note 2] Includes chimney fires

[r] Revised data.

[p] Provisional data.

**Figure 17: Numbers of grassland, woodland and crop fires by fire and rescue authority – calendar years 2001 to 2022[p]**



Description of Figure 17: A line chart showing the number of grassland, woodland and crop fires, by fire and rescue authority, in calendar years.

The chart shows how, over time the numbers in the 3 FRAs have become closer together, although throughout the time series South Wales has had the most fires, and North Wales the fewest.

[p] Provisional data

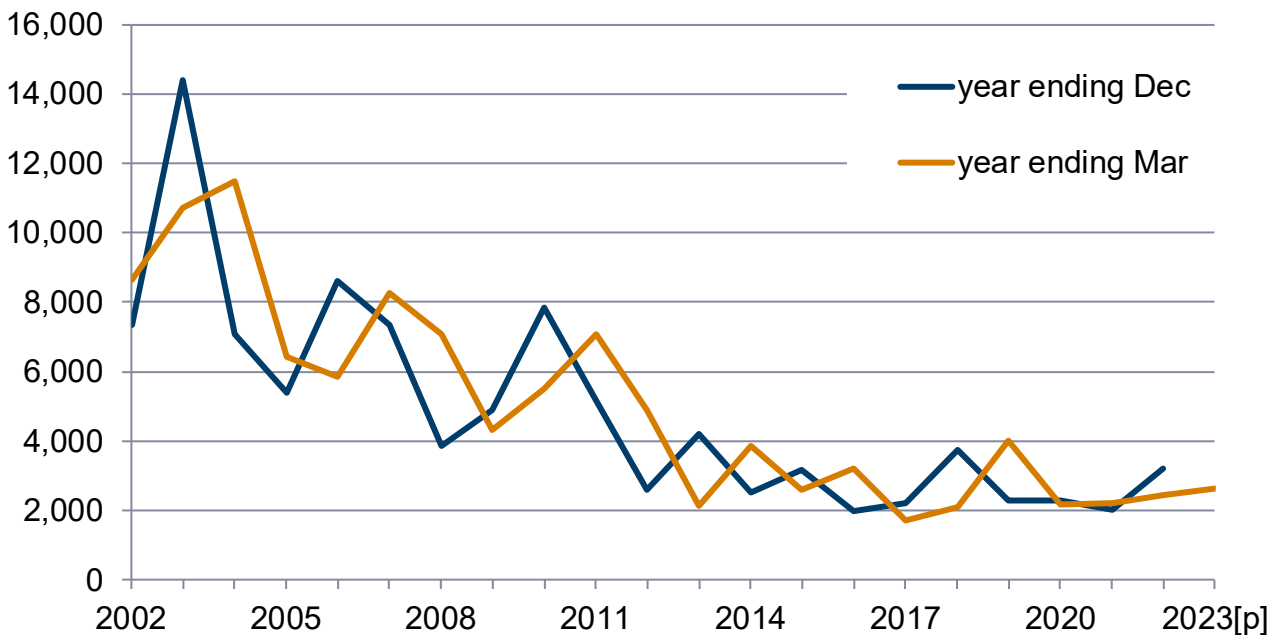
Since 2001 all 3 FRAs have seen a general downward trend, with numbers of grassland woodland and crop fires falling by 74% in South Wales, 46% in Mid and West Wales and 45% in North Wales. Compared with 2021 all FRSs saw an increase, up 89% in North Wales, up 58% Mid and West Wales and South Wales saw a rise of 46%.

### Comparisons between calendar year and financial year

A comparison between calendar years and financial years as shown in figure 18 shows similar patterns with peaks and troughs displaced by 3 months (i.e. a peak seen in calendar year 2003 will be seen in financial year 2003-04). This is intuitively true since calendar years and financial years have 9 months in common (e.g. calendar year 2003 shares 9 months with financial year 2003-04).

The increase in the number of grassland fires for the most recent financial and calendar years are noticeably different (up 7% and 57% respectively) and can be attributed to the high number of fires in March in 2022 and low numbers in March 2023.

**Figure 18: Grassland, woodland and crop fires - comparing calendar years 2001-02 to 2022-23 with financial years 2002 to 2022**



Description of Figure 18: A line chart comparing the time series trend for calendar years and financial years in grassland, woodland and crop fires. The purpose of the chart is to show whether a different trend would be seen if the data were reported in calendar years rather than financial years.

[p] Data for financial year 2022-23 and calendar year 2022 are provisional.

## Easter holidays

The Easter period in 2022 occurred wholly within April 2022, and therefore falls entirely within 2022-23. Easter in 2023 occurred wholly in April 2023 and is therefore outside the scope of this bulletin.

The percentage of grassland fires occurring during Easter increased from 9% in the financial year 2021-22 to 10% in 2022-23. However, calendar year analysis shows the proportion at Easter went down from 13% in 2021 to 8% in 2022.

**Table 13: Analysis of grassland, woodland and crop fires at Easter, 2014 to 2023**  
[Note 1]

	Days of Easter (y/e Mar)	Fires (y/e Mar) [Note 2]	% of fires occurring at Easter (y/e Mar)	Days of Easter (y/e Dec)	Fires (y/e Dec) [Note 2]	% of fires occurring at Easter (y/e Dec)
2014	7	669	17	16	467	18
2015	20	482	18	16	551	17
2016 [Note 3]	19	565	18	17	94	5
2017	10	65	4	16	550	25
2018	24	579	28	16	48	1
2019	8	19	0	16	510	22
2020	16	510	23	16	416	18
2021	21	472	21	16	275	13
2022[p]	11	219	9	16	268	8
2023[p]	16	268	10	[x]	[x]	[x]

Description of Table 13: A table showing the number of fires in the 16-day period around Easter, usually starting the Saturday before Good Friday and ending the Sunday after Easter Monday. The table shows this period in calendar and financial years. The nature of Easter means that in a financial year the number of 'days of Easter' varies, whereas in a calendar year it remains the same. The table shows that the percentage of fires occurring at Easter (in both financial and calendar years varies a great deal (between 0% and 28% for financial years and between 1% and 25% for calendar years shown in the table)

[Note 1] For the purposes of this table, Easter is defined as the 16-day period starting on the Saturday before Good Friday and ending on the Sunday after Easter Monday. For most years this period matches the Easter school holidays. See Key Quality Information for dates.

[Note 2] Grassland, woodland and crop fires occurring in defined Easter period.

[Note 3] The period used in 2016 starts on Friday 25th March to Sunday 10th April, mirroring the school holidays in this year.

[p] Data for financial year 2022-23 and calendar year 2022 are provisional.

[x] Data not available yet



**Table 14: Daily rates of grassland, woodland and crop fires at Easter [Note 1]**

	April & March			March/April		
	at Easter (y/e Mar)	(y/e Mar) [Note 2]	Each year (y/e Mar)	at Easter (y/e Dec)	(y/e Dec) [Note 2]	Each year (y/e Dec)
2014	95.6	27.5	10.6	29.2	17.0	6.9
2015	24.1	16.4	7.2	34.4	31.6	8.7
2016 [Note 3]	29.7	32.7	8.8	5.5	14.9	5.5
2017	6.5	11.0	4.7	34.4	17.6	6.0
2018	24.1	14.3	5.7	3.0	4.4	10.2
2019	2.4	8.1	11.0	31.9	16.1	6.2
2020	31.9	17.3	6.0	26.0	18.3	6.2
2021	22.5	17.0	6.1	17.2	18.3	5.6
2022[p]	19.9	25.0	6.7	16.8	20.6	8.7
2023[p]	16.8	10.5	7.2	[x]	[x]	[x]

Description of Table 14: A table showing daily rates at Easter, March and April and annually, giving an indication of whether numbers of fires at Easter are higher than at other times. The daily rate for the combined months of April and March is shown as in these months there are usually high numbers of fires and they span the Easter period).

[Note 1] For the purposes of this table, Easter is defined as the 16-day period starting on the Saturday before Good Friday and ending on the Sunday after Easter Monday. For most years this period matches the Easter school holidays. See Key Quality Information for dates.

[Note 2] In the financial year April is at the beginning of the period whilst March is at the end (e.g. April 2022 and March 2023 in 2022-23) whilst in the calendar year March and April are consecutive months.

[Note 3] The period used in 2016 starts on Friday 25th March to Sunday 10th April, mirroring the school holidays in this year.

[p] Data for financial year 2022-23 and calendar year 2022 are provisional.

[x] Data not available yet

In 2022-23 the daily rate of fires at Easter was higher than the daily rate in April 2022 and March 2023 combined and more than double the annual daily rate.

For the calendar year 2022 the daily rate at Easter 2022 was lower than the daily rate in March 2022 and April 2022 combined but higher than the annual daily rate.

## Glossary

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

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. Data on chimney fires do not fall within the scope of this bulletin.

**Deliberate** fires include those where deliberate ignition is merely suspected.

**Fire False Alarms** are events in which the Fire and Rescue Authority was called to a reported fire which turned out not to exist. This bulletin does not include data on Special Service Incident False Alarms. False alarms are categorised as follows:

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

**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.

**Grassland fires**, from 2009-10, include fires in gardens, crops, woods, nurseries/market gardens, heathland/moorland, grassland/pasture/grazing etc., scrub land, railway trackside vegetation, roadside vegetation and roadside vegetation. Prior to this date grassland fires referred to primary fires in allotments, gardens, crops, woods and other agricultural locations and secondary fires on grassland, heathland and as a result of intentional straw and stubble burning. This is a broader definition than the land use definition in agricultural publications.

**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.

**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.

## Key quality information

The analysis in this bulletin relates to fire and rescue service incidents between April 2022 and end March 2023 whilst making comparisons with April 2021 to March 2022.

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 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.

## Prevention

Following the exceptional forest fires in Easter 2003 caused by weather conditions, Forest Research used geospatial mapping and qualitative techniques (interviews, observation, and surveys) to characterise and understand the problem of wildfires, focusing on the social factors behind the issue. Their [information paper includes details of measures put in place to avoid similar occurrences](#).

The Welsh Government has issued [guidance on heather and grass burning](#). Currently, burning is only allowed during the following periods:

- 1 October - 31 March in Uplands
- 1 November - 15 March elsewhere

A license is required at all other times and can only be obtained in very specific circumstances. Application for burning during restricted periods can be made through the Welsh Government Website at the above link. It is also illegal to burn between sunset and sunrise. In addition, a Burning Management Plan has to be completed for all proposed burnings.

Burning in Wales is controlled by [The Heather and Grass etc. Burning \(Wales\) Regulations 2008](#) and [The Heather and Grass Burning Code](#), which gives advice on burning best practice.

## Relevance

The Welsh Government uses the information in this bulletin to monitor the trends in grassland fires occurring 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. 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:

- Recording data on Special Service Incidents
- All fires are recorded; pre-IRS statistics were based on a sampled dataset.
- Recording some detail on secondary fires and chimney fires; pre-IRS, only aggregates were previously available.

For more details of the information collected and held on IRS please see [‘Further details’](#).

The incident data are extracted from IRS annually (usually around July/August) and marked provisional at first publication. All bulletins and StatsWales tables excluding the quarterly data usually published in 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. 2022-23 data are currently marked as provisional and may be revised in future publications.

The table below compares the provisional 2021-22 data which was published in September 2022 (and in Grassland, woodland and crop fires 2022-23 in October 2022) with the revised data (extracted in August 2023) as published in this bulletin.

### Comparison of provisional data with revised data (2021-22)

	Provisional 2021-22 Published in September 2022	Revised 2021-22 Published in September 2023	Percentage change
Primary grassland, woodland and crop fires	140	140	0.0
Secondary grassland, woodland and crop fires	2,319	2,318	0.0

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

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

Within the IRS forms system, for addressable locations the user locates the address using a gazetteer and this determines the co-ordinates. For non-addressable locations the user will either select the location on a map or use a mobile data terminal to determine the location. These grid references submitted by the FRAs are used to determine the local authority in which the incident occurred.

### **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:

[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 Deliberate fires bulletin if published) which is usually extracted in July each year. This bulletin is usually published in the October around 7 months after the financial 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.

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 the Department for Communities and Local Government 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 2022-23 (due to be published in December 2023) 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.

### **Easter holidays**

Numbers of fires in March and April may be affected by Easter holidays (bank holidays and school holidays). As the timing of Easter can change this can impact on the financial year in which the school holidays may fall. For the purpose of this bulletin 'Easter' is taken from the Saturday before Good Friday to the Sunday after Easter Monday. School closures due to the COVID-19 pandemic have also been noted.

Main school Easter holidays for the last few years are listed below:

- 2023 – Monday 3rd April to Friday 14<sup>th</sup> April. The Easter period in 2023 falls outside the scope of this bulletin.

Good Friday 7<sup>th</sup> April Easter Monday 10<sup>th</sup> April

- 2022 – Monday 11<sup>th</sup> April to Friday 22<sup>nd</sup> April. The whole of the Easter holidays in 2022 are included in the analysis of fires at Easter in 2021-22.

Good Friday 15<sup>th</sup> April Easter Monday 18<sup>th</sup> April

- 2021 – Monday 29<sup>th</sup> March to Friday 9<sup>th</sup> April. Fires occurring between Saturday 27<sup>th</sup> March and Wednesday 31<sup>st</sup> March (inclusive) are included in the analysis of fires at Easter in 2020-21. The remainder of the Easter holidays in 2021 are included in 2021-22.

Following further school closures in January 2021 due to the COVID-19 pandemic a phased reopening of schools began on 22<sup>nd</sup> February 2021 with all remaining pupils returning to learning on site by 12<sup>th</sup> April 2021.

Good Friday 2<sup>nd</sup> April Easter Monday 5<sup>th</sup> April

- 2020 – Monday 6<sup>th</sup> April to Friday 17<sup>th</sup> April, the whole period falling within the financial year 2020-21. It should be noted that all schools across Wales closed on 20 March 2020 due to the COVID-19 pandemic, with the exception of provision for vulnerable children and children of critical workers. They did not reopen until 29<sup>th</sup> June 2020.

Good Friday 10<sup>th</sup> April, Easter Monday 13<sup>th</sup> April.



For earlier years please see previous publications in this series.

## **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)

[Data for 2014-15 onwards](#)

[Pre 2014-15 data](#) (published by the Scottish Government)

Limited Northern Ireland data are available from the [Northern Ireland Fire and Rescue Service](#).

## **National Statistics status**

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

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

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

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

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

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

- 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

The document is available on the Welsh Government website: <https://www.gov.wales/grassland-fires-april-2022-march-2023>

More information is available in the form of [StatsWales tables](#) that accompany this release.

Accessible Excel tables from the bulletin are also published under the heading ‘Data’ on the [Grassland fires 2022-23](#) webpage. These tables show the full available time series.

Analysis of annual Welsh fire incident data can be found in the bulletin ‘[Fire and Rescue Incident Statistics, 2022-23](#)’:

The bulletin includes charts and information on fires, false alarms and Special Service Incidents, on all location types (dwellings, road vehicles etc.), causes of fires and the presence of smoke alarms.

The [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.

### 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](mailto:stats.inclusion@gov.wales)

## Open Government Licence

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