

SB 110/2015

19 November 2015

Grassland fires, 2014-15

Around one eighth of Fire and Rescue Authority (FRA) attendances at fires or false alarms in 2014-15 were due to grassland, woodland or crop fires. This bulletin examines the impact and patterns in grassland fires in the financial years 2001-02 to 2014-15. The Welsh Government compiles these statistics from reports on all fires attended submitted by all three FRAs in Wales to the Department for Communities and Local Government (CLG).

The bulletin presents the most recent data (2014-15) which are currently provisional. The data were extracted from the Incident Recording System (IRS) in June 2015 and may be revised in subsequent publications. Revised figures for 2013-14 are included in this bulletin. The effect of the revisions is shown in the table in the Quality Information section.

Primary fires are the most serious type of fires attended, usually involving property, vehicles, casualties, or rescues. Secondary fires are the majority of outside fires, plus those in derelict structures.

Summary

Fires:

- The Welsh FRAs attended 2,613 grassland, woodland and crop fires in 2014-15, a decrease of 33 per cent on 2013-14. The number of these fires is prone to fluctuation and the 2014-15 figure follows an 81 per cent increase in the previous year. The 2014-15 figure is the second lowest in the time series (from 2001-02). (*Table 1.1*)
- In 2014-15, both primary and secondary grassland, woodland and crop fires fell by a third; there were 84 primary fires (128 in 2013-14) and 2,529 secondary fires (3,748 in 2013-14). (*Table 1.1*)
- In 2014-15, three quarters of primary and secondary fires on grassland, woodland and crops were started deliberately. (*Table 1.4*)
- In 2014-15, 45 per cent of grassland, woodland and crop fires occurred in the spring months April, May (2014) and March (2015), 13 percentage points lower than in 2013-14. (*Table 1.6*)
- Of the grassland, woodland and crop fires in 2014-15, 52 per cent were in South Wales, 33 per cent were in Mid and West Wales and 16 per cent were in North Wales. (*Table 1.7*)

Casualties:

- There were 6 non-fatal casualties, but no fatal casualties from grassland, woodland and crop fires in Wales in 2014-15. The last fatality resulting from a grassland fire occurred in 2007-08. (*Table 2.1*)

Damage:

- In 2014-15, three fifths of grassland, woodland and crop fires damaged an area less than 20 square metres; this is the highest proportion seen in the available time series (from 2009-10). (*Table 3.1*)

Statistician: Scott Clifford

Tel: 029 2082 6699

E-mail: stats.inclusion@wales.gsi.gov.uk

Next update: February 2017 (provisional)

Twitter: www.twitter.com/statisticswales | www.twitter.com/ystadegaucymru

Cyhoeddwyd gan Y Gwasanaethau Gwybodaeth a Dadansoddi

Llywodraeth Cymru, Parc Cathays, Caerdydd, CF10 3NQ

Ffôn – Swyddfa'r Wasg **029 2089 8099**, Ymholiadau Cyhoeddus **029 2082 3332**

www.llyw.cymru/ystadegau

Issued by Knowledge and Analytical Services

Welsh Government, Cathays Park, Cardiff, CF10 3NQ

Telephone – Press Office **029 2089 8099**, Public Enquiries **029 2082 5050**

www.gov.wales/statistics



Llywodraeth Cymru
Welsh Government

Contents

Section 1: Fires	3
Chart 1.1 Number of fires attended by Fire and Rescue Authorities in Wales, by location	3
Table 1.1 Number of grassland, woodland and crop fires and false alarms, by type of fire and year	4
Chart 1.2 Number of grassland, woodland and crop fires, by type and year	4
Table 1.2 Number of primary grassland, woodland and crop fires by location and year	6
Chart 1.3 Number of primary grassland, woodland and crop fires, by location and year	6
Table 1.3 Number of secondary grassland, woodland and crop fires by location and year	8
Chart 1.4 Number of secondary grassland, woodland and crop fires, by location and year	8
Table 1.4 Number and percentage of grassland, woodland and crop fires by motive and year	9
Table 1.5 Number and percentage of grassland, woodland and crop fires, by month and year	10
Chart 1.5 Number of grassland, woodland and crop fires, by month and year	10
Chart 1.6 Number of grassland, woodland and crop fires and rainfall levels by month, 2014-15	11
Chart 1.7 Numbers of grassland, woodland and crop fires and hours of sunshine by month, 2014-15	11
Table 1.6 Number and percentage of grassland, woodland and crop fires, by Fire and Rescue Authority and year	12
Chart 1.8 Number of grassland, woodland and crop fires by Fire and Rescue Authority and Local Authority 2014-15(p)(a)	12
Table 1.7 Number of grassland, woodland and crop fires and false alarms fires by type and Fire and Rescue Authority	13
Chart 1.9 Number of fires and false alarms on grassland, woodland and crops by Fire and Rescue Authority	13
Section 2: Casualties from grassland, woodland and crop fires	14
Table 2.1 Number of casualties and rescues from grassland, woodland and crop fires by year	14
Section 3: Area of damage caused by grassland, woodland and crop fires	15
Table 3.1 Number and percentage of grassland woodland and crop fires by area damaged and year	15
Section 4: Source of ignition and cause of grassland, woodland and crop fires	16
Chart 4.1 Percentage of primary grassland, woodland and crop fires 2001-02 to 2014-15 by source of ignition	16
Chart 4.2 Percentage of accidental primary grassland, woodland and crop fires, 2001-02 to 2014-15 by main cause	16
Glossary	17
Quality Information	19
Annex 1: Grassland fire data available on Statswales	25

Section 1: 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.

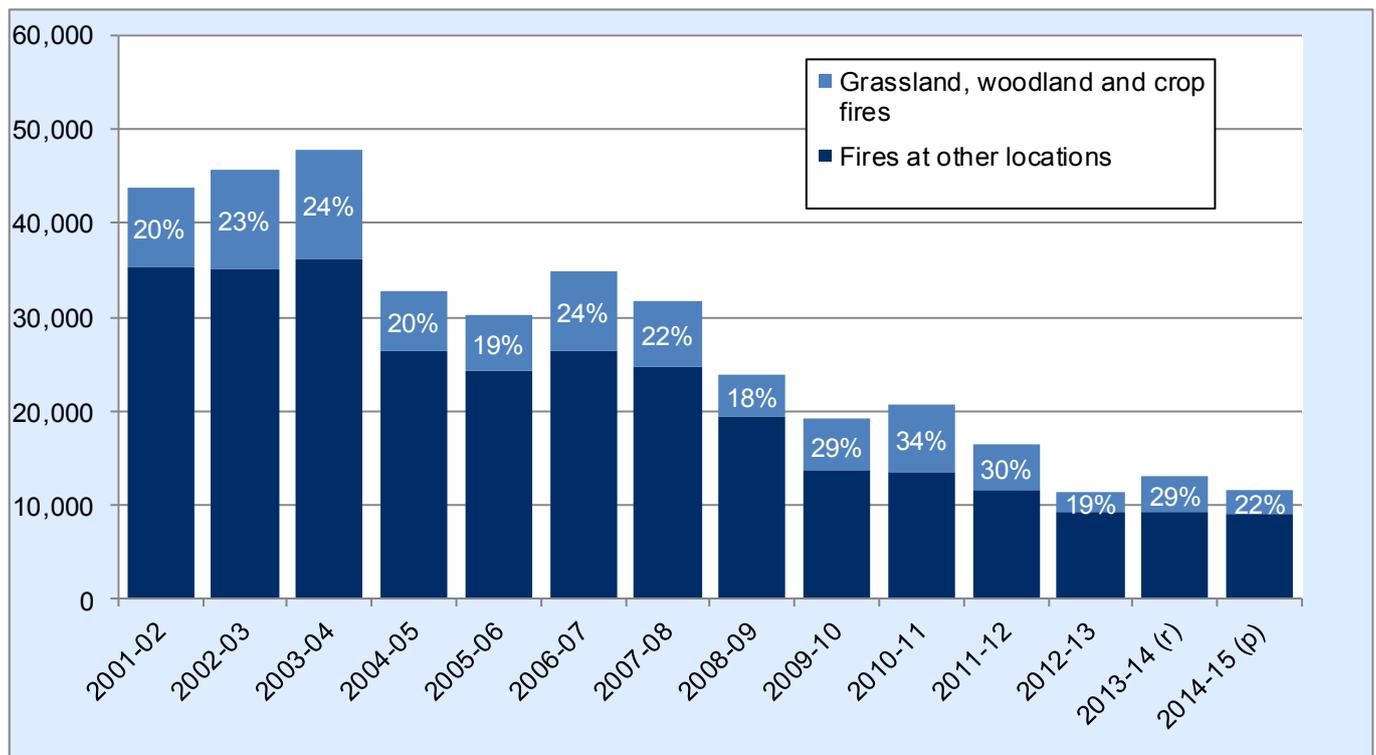
For the definition of chimney fires please see the [Glossary](#).

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 false alarms.

Welsh FRAs attended 27,132 fires or false alarms in 2014-15. Of these, 13 per cent or 3,638 (including 1,025 false alarms) were due to grassland, woodland and crop fires. These fires 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.

Of the 11,650 fires attended in Wales, 2,613 (22 per cent) occurred on grassland, woodland and crops. In 2014-15 the number of grassland, woodland and crop fires (excluding false alarms) attended by the Welsh FRAs fell by 33 per cent compared with 2013-14, and by 70 per cent compared with 2001-02. The chart below shows how the number of fires (and of those, grassland, woodland and crop fires) vary each year. The number of grassland, woodland and crop fires for 2014-15 is the second lowest since 2001-02.

Chart 1.1 Number of fires attended by Fire and Rescue Authorities in Wales, by location



Source: 2001-02 to 2008-09 data from FDR1 fire incident data collection forms, 2009-10 onwards from Incident Recording System

(r) Revised data

(p) Provisional data

In 2014-15, 2 per cent of all primary fires took place on grassland, woodland or crops. The corresponding proportions for secondary fires and false alarms were higher at 39 per cent and 7 per cent respectively.

Numbers of grassland, woodland and crop related false alarms are not available prior to 2009-10. The majority (96 per cent) of the false alarms attended by the FRAs on grassland, woodland and crops were due to calls made with good intent; only 4 per cent were due to malicious calls. In 2014-15 FRAs in Wales attended 11 per cent fewer false alarms on grassland, woodland and crops than in the previous year.

Table 1.1 Number of grassland, woodland and crop fires and false alarms, by type of fire and year

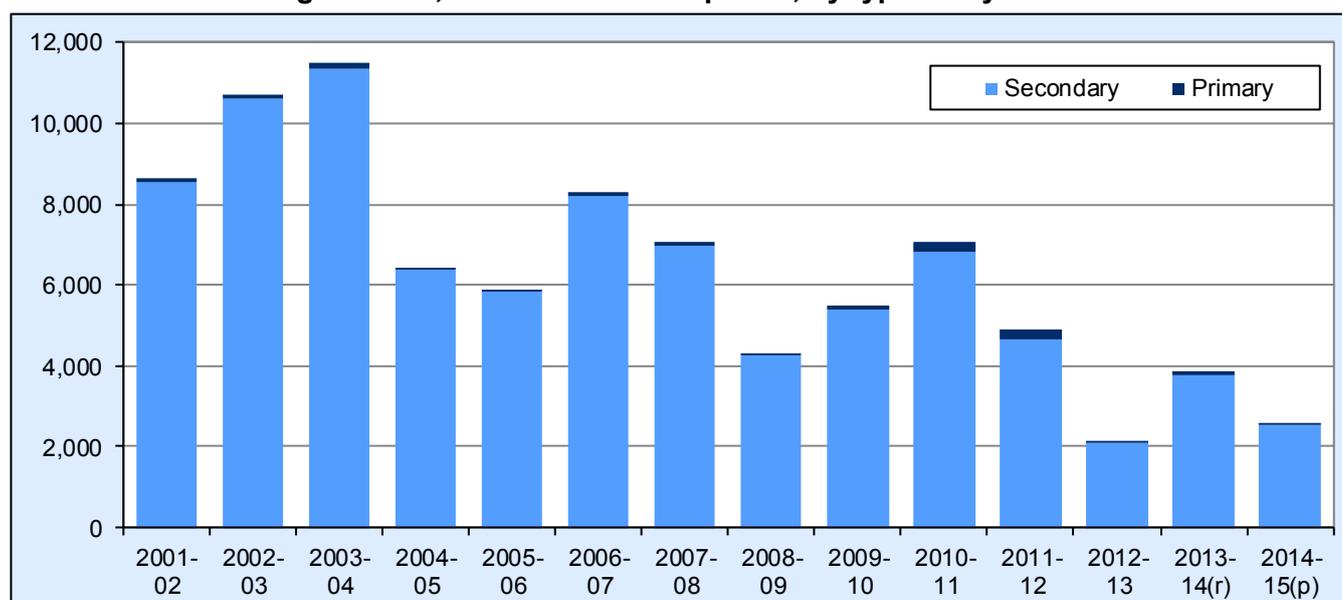
	2010-11	2011-12	2012-13	2013-14(r)	2014-15(p)
Primary fires	6,414	5,687	4,745	4,790	4,560
<i>of which were grassland, woodland and crops</i>	279	256	63	128	84
Secondary fires	13,503	10,162	5,922	7,801	6,541
<i>of which were grassland, woodland and crops</i>	6,816	4,642	2,082	3,748	2,529
All fires	20,688	16,464	11,438	13,169	11,650
<i>of which were grassland, woodland and crop fires</i>	7,095	4,898	2,145	3,876	2,613
False alarms	17,006	15,874	15,088	15,312	15,482
<i>False alarms with location recorded as grassland, woodland or crops</i>	1,742	1,483	823	1,156	1,025
All fires and false alarms	37,694	32,338	26,526	28,481	27,132
<i>of which grassland, woodland and crop fires and false alarms</i>	8,837	6,381	2,968	5,032	3,638

Source: Incident Recording System

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

Chart 1.2 shows the majority of grassland, woodland and crop fires attended are secondary fires (between 95 and 99 per cent each year since 2001-02), and further shows the fluctuations in numbers. Numbers of these fires are likely to be influenced by weather conditions; for instance, 2012-13, which saw the lowest number of grassland, woodland and crop fires in the time series, was one of the wettest financial years since records began. Conversely 2003-04, the peak in the chart below, was a relatively dry year, seeing 10 per cent less rain than the average for 2001-02 to 2014-15. The relationship between these fires and the weather is looked at further in charts 1.6 and 1.7.

Chart 1.2 Number of grassland, woodland and crop fires, by type and year



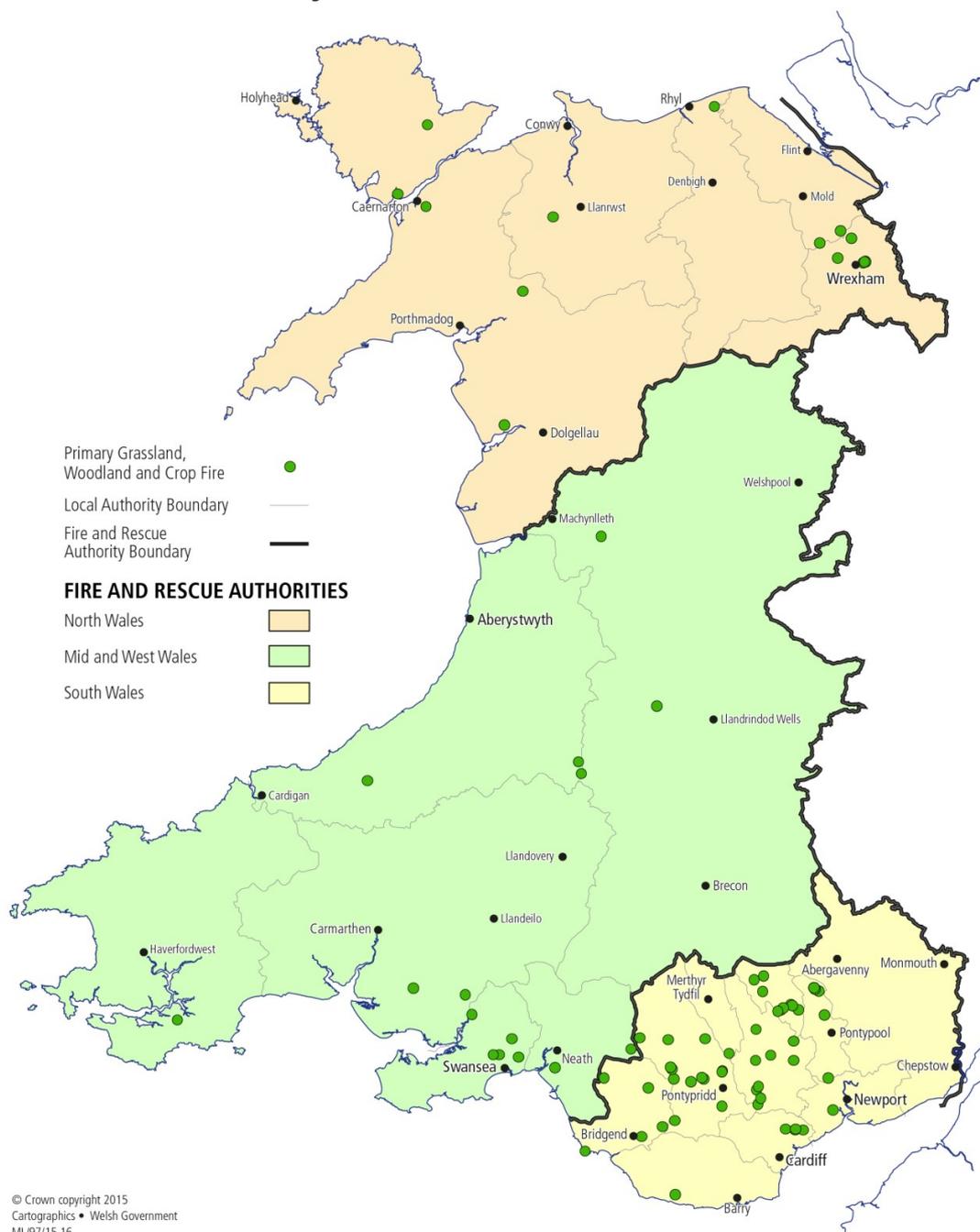
Source: 2001-02 to 2008-09 data from FDR1fire incident data collection forms, 2009-10 onwards from Incident Recording System

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

Primary grassland, woodland and crop fires

Primary fires are the most serious reportable 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. In 2014-15, 84 primary grassland, woodland and crop fires were attended in Wales, and their locations are shown on the map below.

Grassland, Woodland and Crop Primary Fires across Wales, 2014-15



OGL

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

Most grassland locations saw a decrease in the number of primary fires in 2014-15, the exceptions being the smaller categories domestic gardens, tree scrub and 'other'. More than half of primary grassland fires in 2014-15 occurred in woodland.

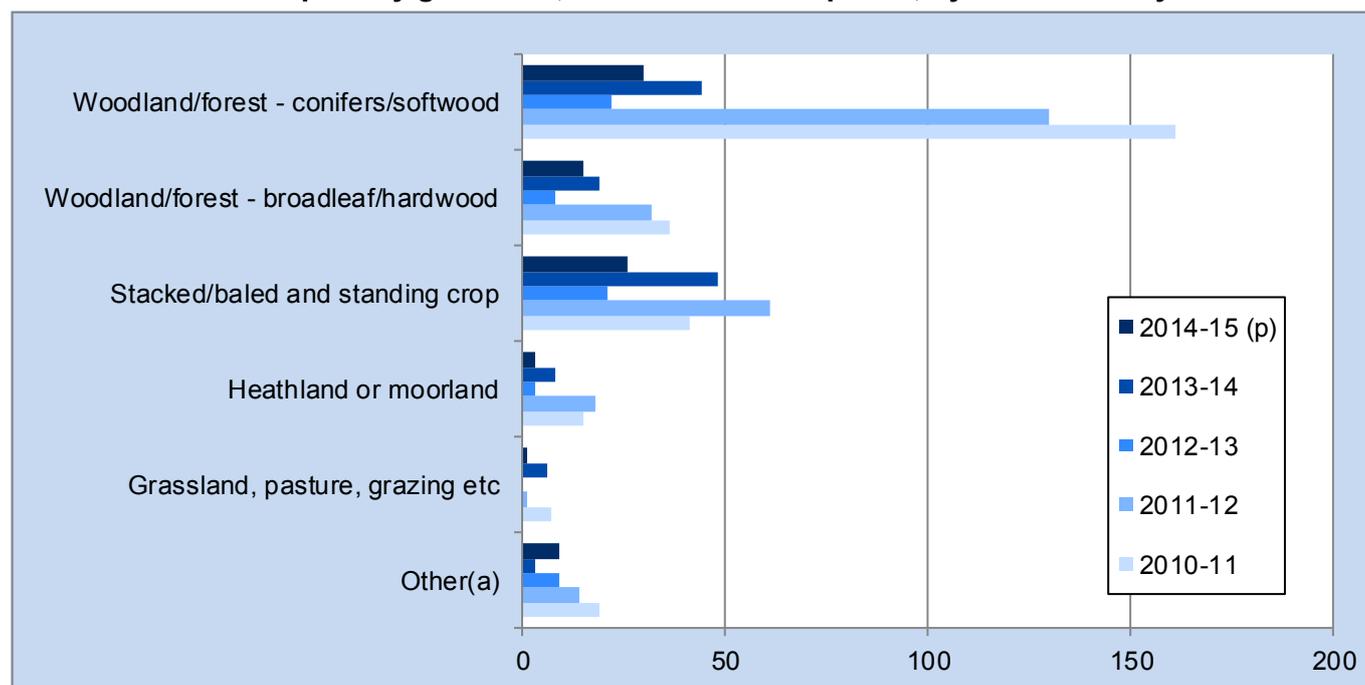
Table 1.2 Number of primary grassland, woodland and crop fires by location and year

	2010-11	2011-12	2012-13	2013-14	2014-15(p)
Domestic garden (vegetation not equipment)	5	5	3	0	3
Grassland, pasture, grazing etc	7	1	0	6	1
Heathland or moorland	15	18	3	8	3
Stacked/baled crop	32	26	18	38	21
Standing crop	9	35	3	10	5
Tree scrub	9	3	1	1	3
Woodland/forest - broadleaf/hardwood	36	32	8	19	15
Woodland/forest - conifers/softwood	161	130	22	44	30
Other (a)	5	6	5	2	3
All primary grassland, woodland and crop fires	279	256	63	128	84

Source: Incident Recording System

(a) Hedges (from 2011-12), nurseries, market gardens, road side vegetation and scrub land.
 (p) Provisional data.

Chart 1.3 Number of primary grassland, woodland and crop fires, by location and year



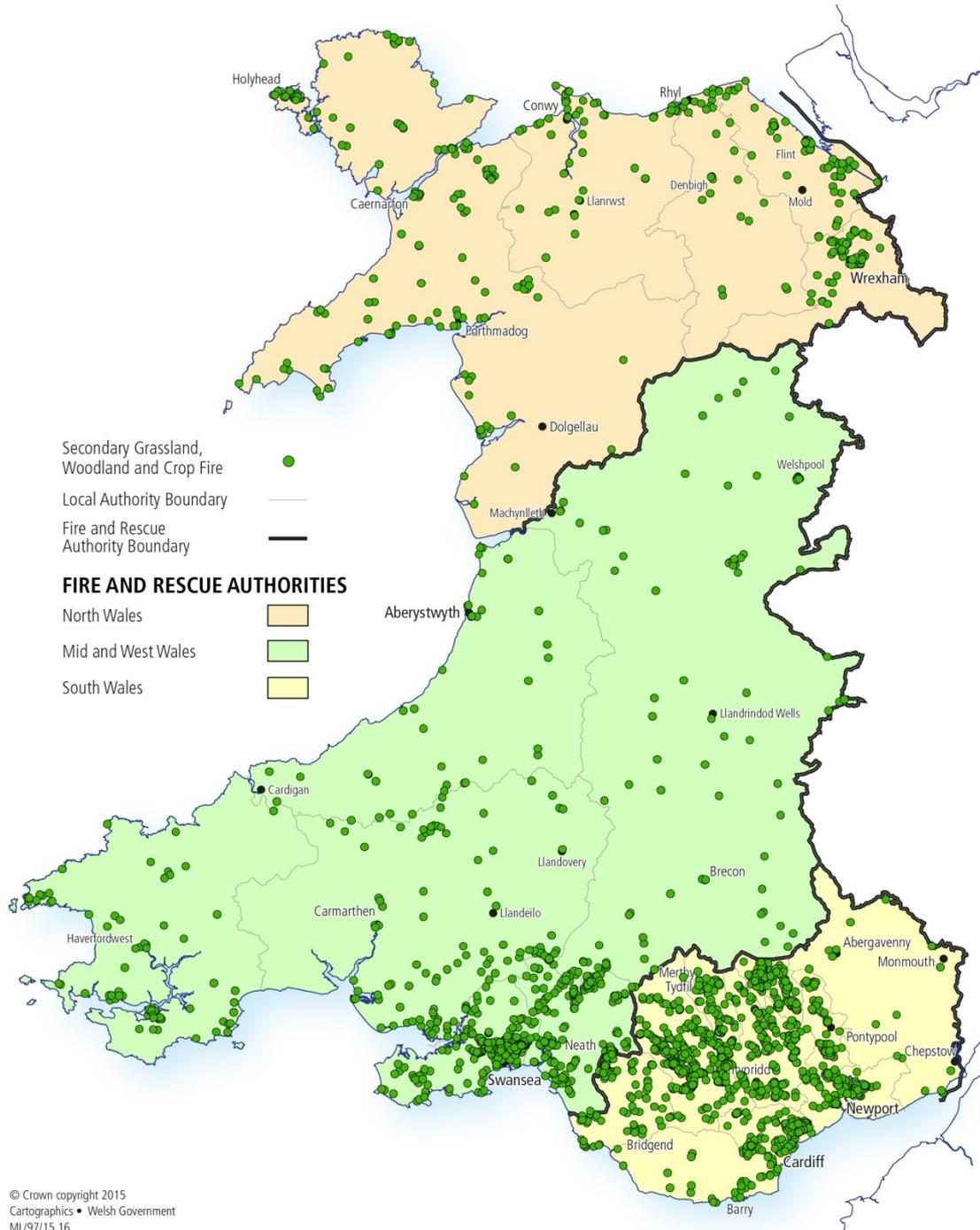
Source: Incident Recording System

(a) 'Other' shown in the above chart includes domestic gardens, hedge (from 2011-12), nurseries and market gardens, roadside vegetation, scrub land and tree scrub.
 (p) Provisional data.

Secondary grassland, woodland and crop fires

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. In 2014-15 there were 2,529 secondary grassland, woodland and crop fires in Wales, the map below shows their locations.

Grassland, Woodland and Crop Secondary Fires across Wales, 2014-15



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

Of all secondary fires that were reported in Wales, grassland, woodland and crop fires accounted for 39 per cent in 2014-15, a decrease of 9 percentage points from the previous year. Typically around half of secondary fires occurred on grassland, woodland and crops since 2009-10; two years have seen lower proportions, 2012-13 (35 per cent) and 2014-15(39 per cent).

Most locations in the table below saw a fall in the number of these fires; the only increases occurred in railway trackside vegetation and 'other'. 6 in 10 secondary grassland, woodland and crop fires occurred on either 'grassland, pasture, grazing etc.' or scrub land in 2014-15.

Table 1.3 Number of secondary grassland, woodland and crop fires by location and year

	2010-11	2011-12	2012-13	2013-14(r)	2014-15(p)
Canal/riverbank vegetation	61	47	29	70	40
Domestic garden (vegetation not equipment)	239	238	89	157	114
Grassland, pasture, grazing etc	2,293	1,329	595	1,220	942
Heathland or moorland	1,038	736	343	470	349
Hedge (a)	..	3	100	165	132
Railway trackside vegetation	84	57	32	22	32
Roadside vegetation	339	224	125	210	113
Scrub land	1,942	1,322	580	1,158	581
Straw/stubble burning	87	65	20	23	22
Tree scrub	727	616	167	253	202
Other (b)	6	5	2	0	2
All secondary grassland, woodland and crop fires	6,816	4,642	2,082	3,748	2,529

Source: Incident Recording System

(a) Category not included in IRS until 2011-12

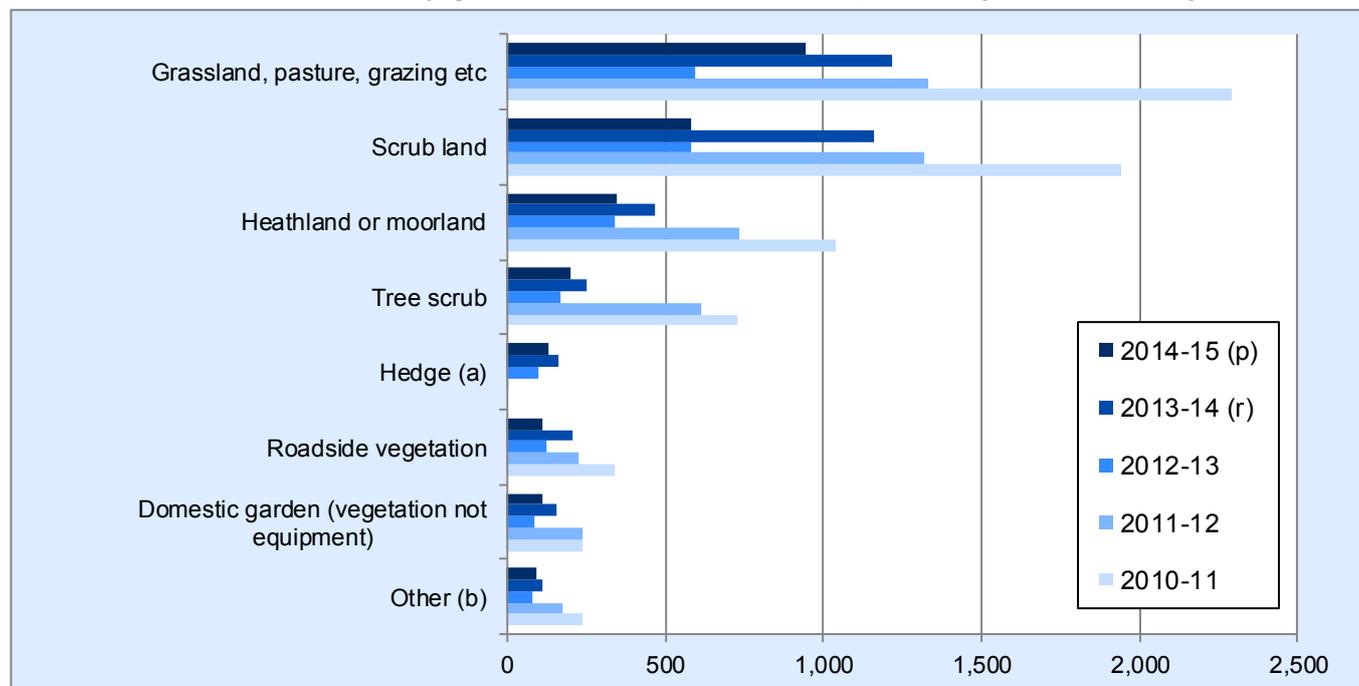
(b) Nurseries, market gardens, stacked/baled crop, woodland/forest - broadleaf/hardwood and woodland/forest - conifers/softwood.

(r) Revised data.

(p) Provisional data.

.. Data not available

Chart 1.4 Number of secondary grassland, woodland and crop fires, by location and year



Source: Incident Recording System

(a) Category not included in IRS until 2011-12

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

(r) Revised data.

(p) Provisional data.

Grassland, woodland and crop fires by motive

In 2014-15 the number of deliberate primary grassland, woodland and crop fires in Wales mirrored the overall drop in primary grassland, woodland and crop fires, falling by a third. The number of accidental primary grassland, woodland and crop fires also fell, from 42 fires in 2013-14 to 26 in 2014-15. Almost 7 in 10 primary grassland, woodland and crop fires were deliberate in 2014-15, a larger proportion than in the 2 previous years, but lower than years before 2012-13.

Since the introduction of the Incident Recording System (IRS) in April 2009 for collecting FRA incident data, greater detail relating to secondary fires has become available. There were 1,910 deliberate secondary grassland, woodland and crop fires in 2014-15, more than 1,000 fewer than in the previous year. The proportion of secondary grassland, woodland and crop fires which were deliberate decreased by 2 percentage points in 2014-15 to 76 per cent.

Of the 645 accidental grassland, woodland and crop fires in 2014-15, 30 per cent occurred on grassland, pasture, grazing etc. and 20 per cent on heathland and moorland. Of the 1,968 deliberate grassland, woodland and crop fires in 2014-15, 38 per cent occurred on grassland, pasture, grazing etc. and 25 per cent on scrub land.

Table 1.4 Number and percentage of grassland, woodland and crop fires by motive and year

	Number			Percentage		
	Deliberate	Accidental	All	Deliberate	Accidental	All
Primary fires						
2010-11	222	57	279	80	20	100
2011-12	205	51	256	80	20	100
2012-13	39	24	63	62	38	100
2013-14	86	42	128	67	33	100
2014-15 (p)	58	26	84	69	31	100
Secondary fires						
2010-11	5,852	964	6,816	86	14	100
2011-12	3,814	828	4,642	82	18	100
2012-13	1,731	351	2,082	83	17	100
2013-14 (r)	2,912	836	3,748	78	22	100
2014-15 (p)	1,910	619	2,529	76	24	100
All fires						
2010-11	6,074	1,021	7,095	86	14	100
2011-12	4,019	879	4,898	82	18	100
2012-13	1,770	375	2,145	83	17	100
2013-14 (r)	2,998	878	3,876	77	23	100
2014-15 (p)	1,968	645	2,613	75	25	100

Source: Incident Recording System

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

Grassland, woodland and crop fires by month

The majority of grassland, woodland and crop fires take place in the spring and summer months. April 2014 recorded the highest proportion (21 per cent) of grassland fires for the financial year 2014-15, March 2015 and July 2014 the second and third highest (17 per cent for each month).

The occurrence of outdoor fires is likely to be influenced by the weather. Data from the Met Office shows that in 2014-15 April was the fourth driest month of the year in terms of rainfall and the fifth sunniest. July was the second driest and the sunniest month.

January saw the fewest fires, the most rainfall and was the second least sunny month.

Met Office data are available from: <http://www.metoffice.gov.uk/climate/uk/>

Table 1.5 Number and percentage of grassland, woodland and crop fires, by month and year

	Number					Percentage				
	2010-11	2011-12	2012-13	2013-14(r)	2014-15(p)	2010-11	2011-12	2012-13	2013-14	2014-15
April	2,443	1,617	496	1,196	561	34.4	33.0	23.1	30.9	21.5
May	1,205	830	376	592	185	17.0	16.9	17.5	15.3	7.1
June	1,034	251	74	433	278	14.6	5.1	3.4	11.2	10.6
July	324	332	114	732	437	4.6	6.8	5.3	18.9	16.7
August	176	219	53	176	139	2.5	4.5	2.5	4.5	5.3
September	137	116	77	107	286	1.9	2.4	3.6	2.8	10.9
October	132	142	36	40	56	1.9	2.9	1.7	1.0	2.1
November	36	53	51	57	43	0.5	1.1	2.4	1.5	1.6
December	20	22	16	33	30	0.3	0.4	0.7	0.9	1.1
January	69	46	12	13	22	1.0	0.9	0.6	0.3	0.8
February	40	96	216	18	134	0.6	2.0	10.1	0.5	5.1
March	1,479	1,174	624	479	442	20.8	24.0	29.1	12.4	16.9
Total fires	7,095	4,898	2,145	3,876	2,613	100.0	100.0	100.0	100.0	100.0

Source: Incident Recording System

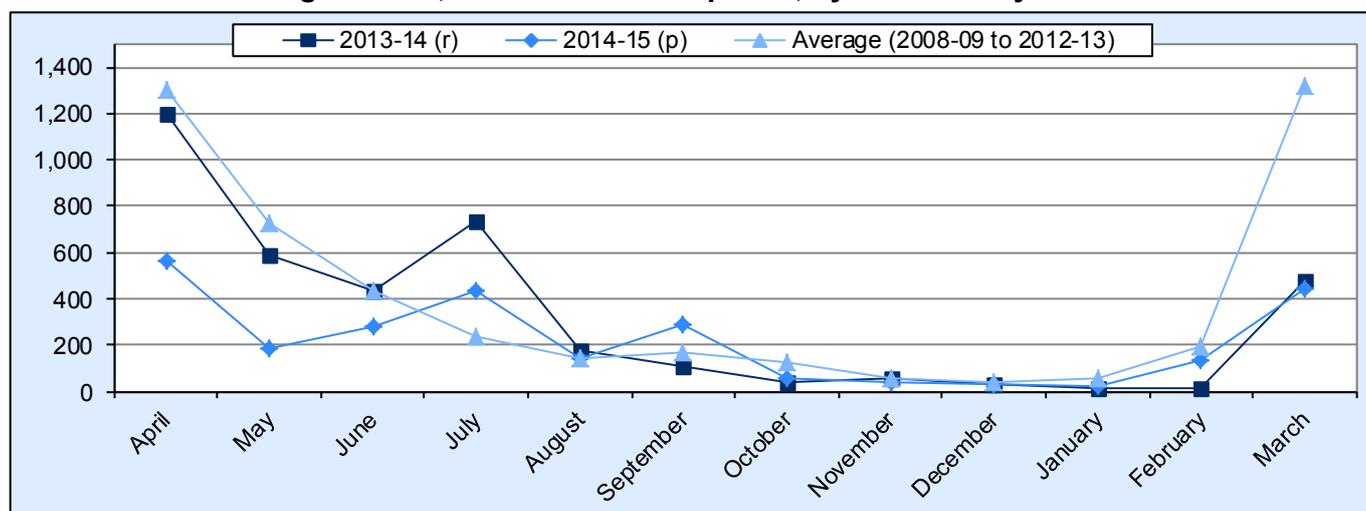
(r) Revised data.

(p) Provisional data.

Most months between April 2014 and March 2015 saw a decrease compared with the previous year; the exceptions were Sept and Oct 2014 and Jan and Feb 2015. The largest decreases were seen in May 2014 (69 per cent compared with May 2013) and April 2014 (53 per cent compared with April 2013). The chart below highlights the drop in the number of fires in March in recent years.

February 2015 saw more than 7 times more fires than in 2014 when the number of fires was exceptionally low and around two thirds less rain. Other weather conditions such as snow and ice may also affect the number of fires in the winter.

Chart 1.5 Number of grassland, woodland and crop fires, by month and year



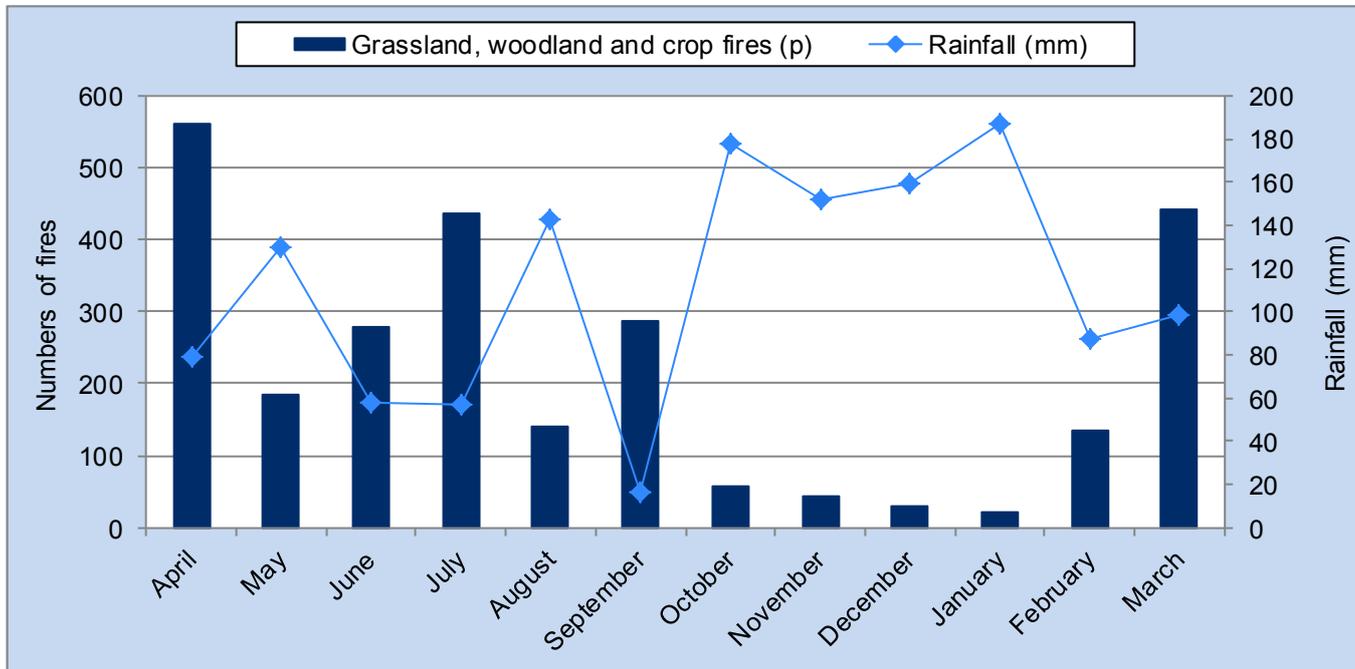
Source: Data for 2008-09 from FDR1 and FDR3 Fire incident data collection forms, 2009-10 onwards from Incident Recording System

(r) Revised data.

(p) Provisional data.

The chart below shows the relationship between the number of grassland, woodland and crop fires and the levels of rainfall each month in 2014-15. Broadly speaking, when the levels of rainfall are high the number of fires seen in that month are low. For instance the months October to January had the highest levels of rainfall in the year; this period corresponds to the lowest monthly numbers of fires in the year. Similar patterns can be seen in earlier years.

Chart 1.6 Number of grassland, woodland and crop fires and rainfall levels by month, 2014-15

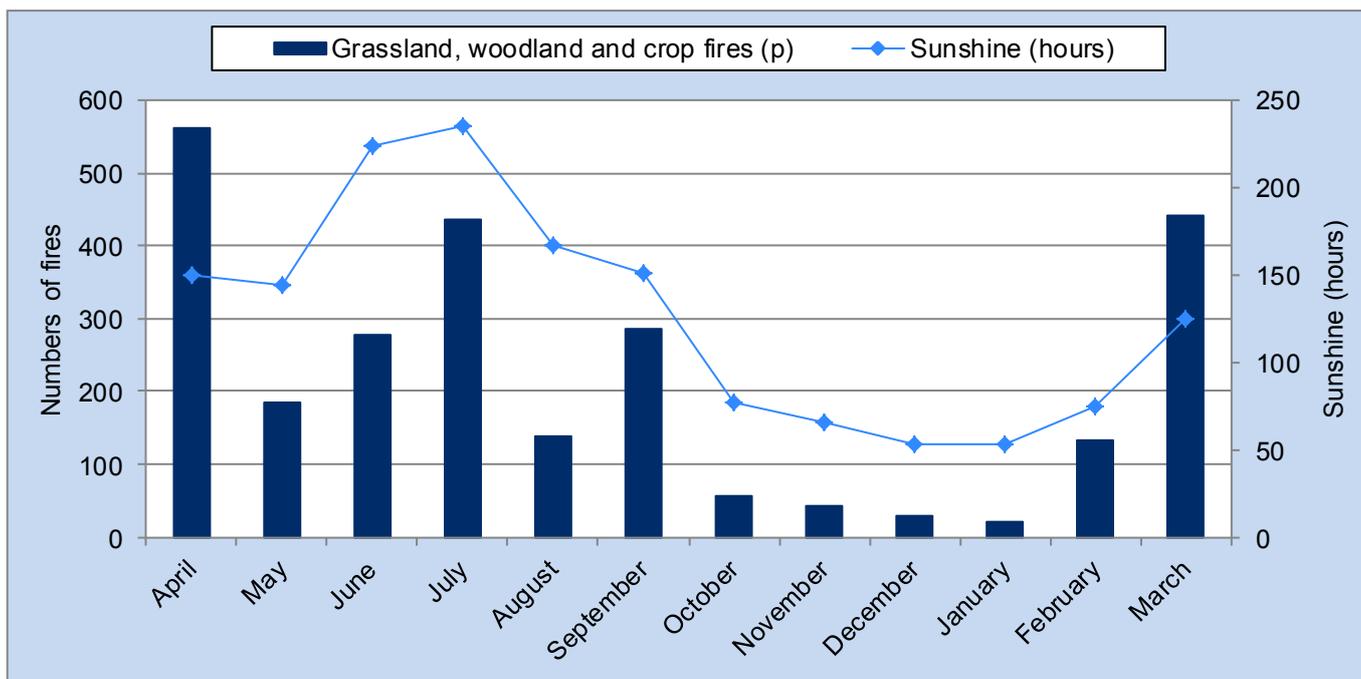


Source: Incident Recording System, Met Office

(p) Provisional data

As may be expected there is also a pattern in the numbers of grassland, woodland and crop fires and hours of sunshine, as can be seen in the chart below.

Chart 1.7 Numbers of grassland, woodland and crop fires and hours of sunshine by month, 2014-15



Source: Incident Recording System, Met Office

(p) Provisional data

Fires and false alarms by Fire and Rescue Authority

Throughout the time series shown in the table below South Wales FRA attended more than half of the grassland, woodland and crop fires occurring in Wales each year. Of the 2,613 grassland fires in 2014-15, 52 per cent were in South Wales, 33 per cent were in Mid and West Wales and 16 per cent were in North Wales.

The number of grassland, woodland and crop fires fell in all three FRAs in 2014-15; in South Wales the number fell by 38 per cent, whilst in Mid and West Wales and North Wales the corresponding decreases were 31 per cent and 14 per cent respectively. Since 2001-02 the number of grassland, woodland and crop fires has fallen by 74 per cent in South Wales, 64 per cent in Mid and West Wales and 61 per cent in North Wales.

Table 1.6 Number and percentage of grassland, woodland and crop fires, by Fire and Rescue Authority and year

	Number			Percentage		
	North Wales	Mid and West Wales	South Wales	North Wales	Mid and West Wales	South Wales
2005-06	856	1,739	3,277	15	30	56
2006-07	1,275	2,410	4,595	15	29	55
2007-08	825	2,185	4,054	12	31	57
2008-09	505	1,285	2,515	12	30	58
2009-10	675	1,471	3,370	12	27	61
2010-11	829	1,934	4,332	12	27	61
2011-12	837	1,441	2,620	17	29	53
2012-13	282	724	1,139	13	34	53
2013-14(r)	480	1,224	2,172	12	32	56
2014-15(p)	411	850	1,352	16	33	52

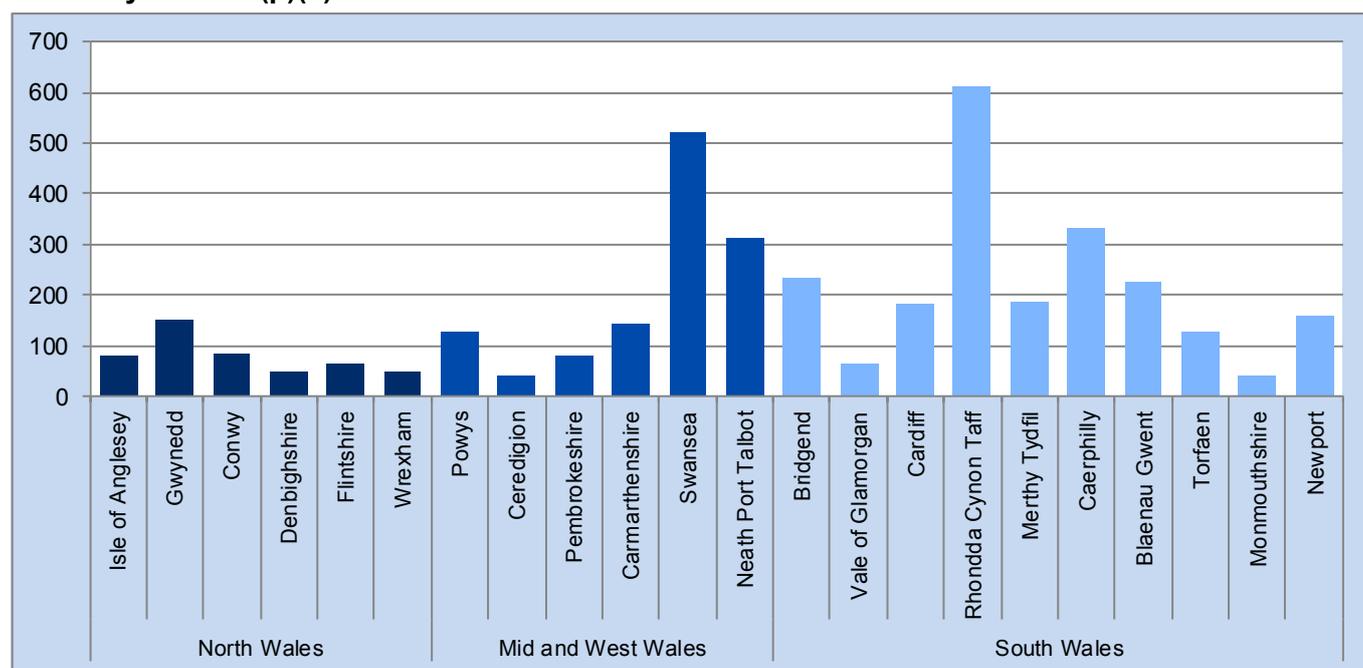
Source: 2001-02 to 2008-09 data from FDR1 and FDR3 Fire incident data collection forms, 2009-10 onwards from Incident Recording System

(p) Provisional data.

(r) Revised

Rhondda Cynon Taff and Swansea local authorities had the highest proportion of grassland, woodland and crop fires in Wales in 2014-15 with 14 per cent and 13 per cent respectively; Monmouthshire had the smallest proportion with less than 1 per cent. Similar proportions were seen in earlier years.

Chart 1.8 Number of grassland, woodland and crop fires by Fire and Rescue Authority and Local Authority 2014-15(p)(a)



Source Incident Recording System

(a) Local authority based on grid references; see the Key Quality Information for further details.

(p) Provisional

Data on false alarms on grassland woodland and crops has only become available with the introduction of IRS in April 2009.

In 2014-15 the pattern of grassland, woodland and crops false alarms across the three FRAs is different to that for fires. Over half of these false alarms attended were in Mid and West Wales (529 of the 1,025 false alarms); 416 (41 per cent) occurred in South Wales and 80 (8 per cent) were in North Wales. Only 4 per cent of these false alarms in 2014-15 were due to malicious calls, 96 per cent were due to good intent. South Wales had the highest number of malicious calls relating to grassland, woodland and crop false alarms, which in turn equated to 6 per cent of the grassland, woodland and crop false alarms attended in the region.

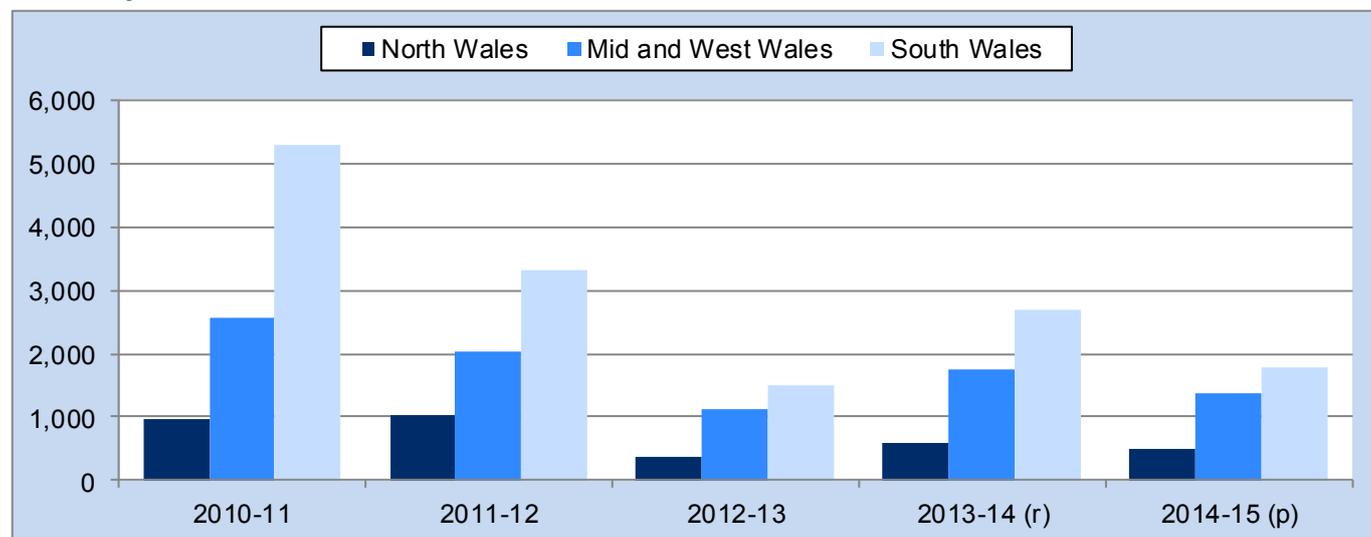
Table 1.7 Number of grassland, woodland and crop fires and false alarms fires by type and Fire and Rescue Authority

	2010-11	2011-12	2012-13	2013-14 (r)	2014-15 (p)
North Wales					
Primary fires	34	36	18	20	18
Secondary fires	795	801	264	460	393
False Alarms	128	183	81	105	80
All incidents	957	1,020	363	585	491
Mid and West Wales					
Primary fires	50	59	11	25	15
Secondary fires	1,884	1,382	713	1,199	835
False Alarms	640	599	394	528	529
All incidents	2,574	2,040	1,118	1,752	1,379
South Wales					
Primary fires	195	161	34	83	51
Secondary fires	4,137	2,459	1,105	2,089	1,301
False Alarms	974	701	348	523	416
All incidents	5,306	3,321	1,487	2,695	1,768
Wales					
Primary fires	279	256	63	128	84
Secondary fires	6,816	4,642	2,082	3,748	2,529
False Alarms	1,742	1,483	823	1,156	1,025
All incidents	8,837	6,381	2,968	5,032	3,638

Source: Incident Recording System

(r) Revised data
(p) Provisional data

Chart 1.9 Number of fires and false alarms on grassland, woodland and crops by Fire and Rescue Authority



Source: Incident Recording System

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

Section 2: Casualties from grassland, woodland and crop fires

In each of the last three years there have been fewer than 10 casualties resulting from grassland, woodland and crop fires. Noticeably in spite of there being fewer fires in 2014-15 than the previous year there were more casualties.

There has been one fatal casualty in grassland, woodland and crop fires since 2001-02, occurring in 2007-08. Since 2001-02 there have been 82 non-fatal casualties in these fires; almost half of the injuries incurred were burns and 28 per cent were sent for precautionary checks. Data on rescues from fires has only become available with the introduction of IRS in April 2009. Since 2009-10 there has been 1 rescue of an uninjured person from a grassland, woodland or crop fire, which occurred in 2010-11.

There were 6 non-fatal casualties in 2014-15, 5 more than in 2013-14. These 6 casualties equate to 1 per cent of all non-fatal fire casualties in Wales in 2014-15. 2 of these casualties had burns, 4 were sent for precautionary checks or given first aid.

All 6 casualties were the result of accidental fires. Fires started deliberately have accounted for around a third of non-fatal casualties from grassland, woodland and crop fires since 2009-10.

4 of the casualties occurred in fires attended by Mid and West Wales FRA; South Wales and North Wales FRAs each attended a fire with 1 casualty.

Table 2.1 Number of casualties and rescues from grassland, woodland and crop fires by year

	<u>Fatalities</u>	<u>Non-fatal casualties</u>	<u>Rescues (no injury) (a)</u>
2001-02	0	1	..
2002-03	0	10	..
2003-04	0	9	..
2004-05	0	10	..
2005-06	0	5	..
2006-07	0	1	..
2007-08	1	0	..
2008-09	0	6	..
2009-10	0	8	0
2010-11	0	10	1
2011-12	0	10	0
2012-13	0	5	0
2013-14	0	1	0
2014-15(p)	0	6	0

Source: Data for 2008-09 from FD1 and FDR3 Fire incident data collection forms, 2009-10 onwards from Incident Recording System

(a) Data not collected prior to 2009-10.

(p) Provisional data.

.. Data not available

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 2014-15, 61 per cent of primary grassland, woodland and crop fires in Wales damaged 20 square metres or less. A similar proportion of secondary fires (60 per cent) saw damage of 20 square metres or less. 25 per cent of the primary fires damaged over 200 square metres, with the remaining proportion (14 per cent) damaging between 21 and 200 square metres. However these proportions were reversed for secondary fires with 25 per cent seeing between 21 and 200 square metres damaged and 15 per cent over 200 square metres. This change in patterns for primary and secondary fires may be due in part to larger fires being classified as primary fires as a result of 5 or more appliances attending.

Table 3.1 Number and percentage of grassland woodland and crop fires by area damaged and year

	Number					Percentage				
	2010-11	2011-12	2012-13	2013-14(r)	2014-15(p)	2010-11	2011-12	2012-13	2013-14(r)	2014-15(p)
Primary fires										
0-20 sq m	142	137	37	58	51	50.9	53.5	58.7	45.3	60.7
21-200 sq m	44	38	10	31	12	15.8	14.8	15.9	24.2	14.3
201+ sq m	87	81	16	39	21	31.2	31.6	25.4	30.5	25.0
Total (a)	279	256	63	128	84	100.0	100.0	100.0	100.0	100.0
Secondary fires										
0-20 sq m	3,319	2,487	1,169	2,092	1,518	48.7	53.6	56.1	55.8	60.0
21-200 sq m	2,189	1,294	564	1,076	635	32.1	27.9	27.1	28.7	25.1
201+ sq m	1,195	852	349	580	376	17.5	18.4	16.8	15.5	14.9
Total (a)	6,816	4,642	2,082	3,748	2,529	100.0	100.0	100.0	100.0	100.0
All fires										
0-20 sq m	3,461	2,624	1,206	2,150	1,569	48.8	53.6	56.2	55.5	60.0
21-200 sq m	2,233	1,332	574	1,107	647	31.5	27.2	26.8	28.6	24.8
201+ sq m	1,282	933	365	619	397	18.1	19.0	17.0	16.0	15.2
Total (a)	7,095	4,898	2,145	3,876	2,613	100.0	100.0	100.0	100.0	100.0

Source: Incident Recording System

(a) Includes a small number of fires in 2010-11 and 2011-12 of unknown area.

(r) Revised data.

(p) Provisional data

In 2014-15 2 per cent of grassland, woodland and crop fires took place on National Park land; all of these fires were secondary fires. Since 2009-10 there have been 664 grassland, woodland and crop fires on National park land, equating to 3 per cent of all grassland, woodland and crop fires. 95 per cent of these fires (since 2009-10) were secondary fires.

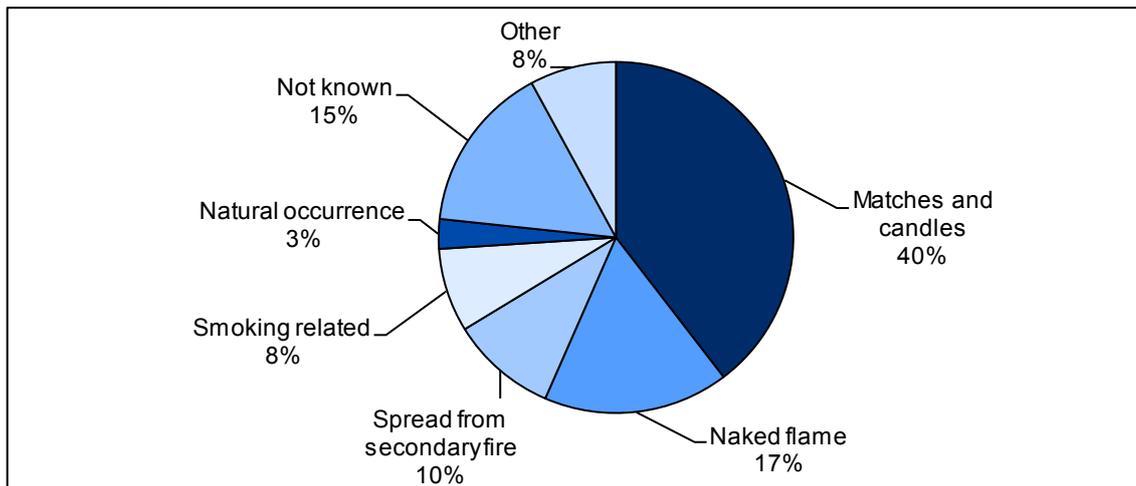
In 14 per cent of primary fires in 2014-15, strong winds were a rapid growth factor. Comparative data for secondary fires is not available.

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. Chart 4.1 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 careless handling, overheating or natural causes.

In 40 per cent of the primary grassland fires between 2001-02 and 2014-15 the source of ignition were matches or candles. The next largest category was 'naked flame' with 17 per cent.

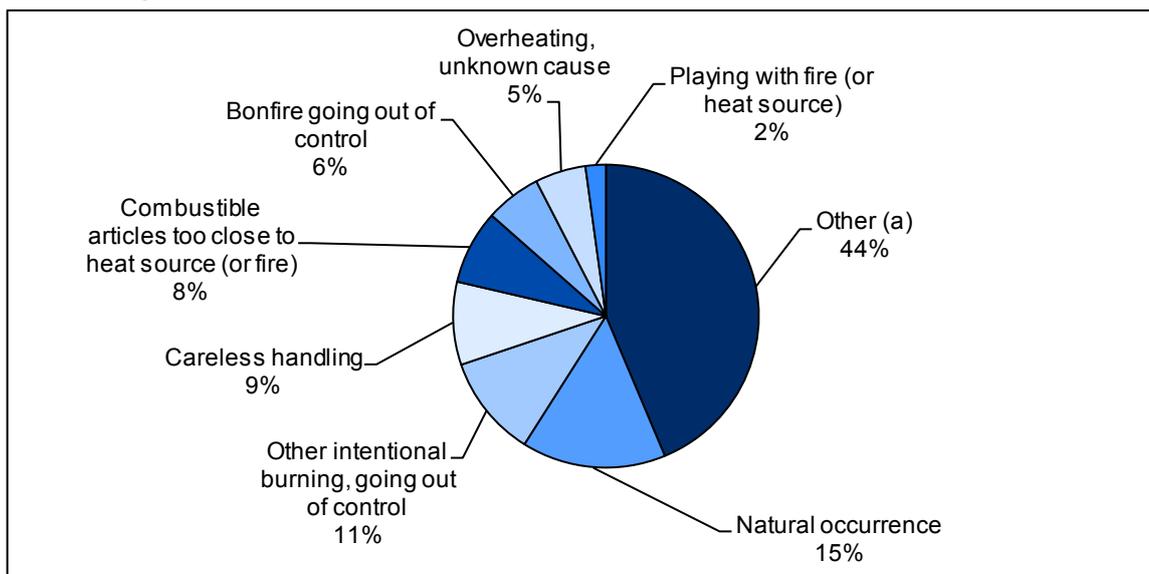
Chart 4.1 Percentage of primary grassland, woodland and crop fires 2001-02 to 2014-15 by source of ignition



Source: 2001-02 to 2008-09 data from FDR1 Fire incident data collection forms, 2009-10 onwards from Incident Recording System

The causes of accidental primary grassland, woodland and crop fires are varied. In Chart 4.2, 44 per cent of these fires are shown as having 'other' causes. They include negligent use of equipment, fault in equipment or appliance, faulty fuel supply and person too close to heat source (or fire) as well as unspecified causes. 15 per cent of these fires were determined to have been caused naturally.

Chart 4.2 Percentage of accidental primary grassland, woodland and crop fires, 2001-02 to 2014-15 by main cause



Source: 2001-02 to 2008-09 data from FDR1 Fire incident data collection forms, 2009-10 onwards from Incident Recording System

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

Glossary

Accidental fires include those where 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.

Dangerous substances can spread fire, intensify fire, intensify smoke, render water unsuitable or produce toxic gases.

Deliberate fires include those where deliberate ignition is merely suspected.

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. False alarms are categorised as follows:

- **Malicious False Alarms** are calls made with the intention of getting the fire and rescue service to attend a non-existent fire-related event, including deliberate and suspected malicious intentions.
- **Good Intent False Alarms** are calls made in good faith in the belief that the fire and rescue service really would attend a fire.
- **False Alarms Due to Apparatus** are calls initiated by fire alarm and fire-fighting equipment operating (including accidental initiation of alarm apparatus by persons).

Fatal casualty 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 (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. The issue is being investigated by the Department for Communities and Local Government (CLG).

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.

Quality Information

Policy context and supplementary information

Wales has had a devolved fire and rescue service since 2004-05 which is divided into three regions.

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 has 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.

South Wales Fire and Rescue Authority serves a population of almost 1.5 million people, covers 1,085 square miles and has 50 fire stations.

In November 2011 the Welsh Government consulted with users of fire statistics with regards to the existing outputs. The consultation closed in February 2012, however you are able to view the consultation and response to the consultation at:

<http://gov.wales/consultations/statistics/fire/?status=closed&lang=en>

Fire Incident data are used as outcome indicators for the *Programme for Government*, the Welsh Government's plan of action for 2011-2016. The indicator measurements are number of fires attended (excluding false alarms) and number of casualties from fires and are included in the category 'Safer Communities'.

Fire Safety Advice from the Welsh Government can be found at:

<http://gov.wales/topics/people-and-communities/communities/safety/fire/?lang=en>

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. \(Burning\) Regulations 2008](#) and [The Heather and Grass Burning Code](#), which gives advice on burning best practice.

A leaflet, '[Heather and Grass Burning in Wales](#)', was published in January 2012 and provides important information about the burning season, what can be burned, and includes health and safety advice.

Data Source and Scope

Since April 2009 incident data (relating to fires, false alarms and Special Service Incidents) have been submitted by the Fire and Rescue Authorities to the Department for Communities and Local Government via the Incident Recording System (IRS). IRS does not currently collect data from FRAs in Northern Ireland.

Previously data was 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.
- Detail on secondary fires and chimney fires are now recorded; pre-IRS, only aggregates were available.

Data in this statistical release has been provided by the Department for Communities and Local Government. The most recent statistics cover the financial year 2014-15.

Data for the most recent period is extracted in May following the financial year to which the data relates. Data for the period April 2013 to March 2015 were extracted from IRS in June 2015.

Information on the data collected via IRS system can be found on the Department for Communities and Local Government's website:

<https://www.gov.uk/government/publications/incident-recording-system-for-fire-and-rescue-authorities>

Databases for 1994 to 2008 contain all fires with casualties, but only a sample of other fires.

Prior to 2009-10 the data had been weighted to agreed fire and rescue totals. The detailed analysis of the data other than for casualties, or fires involving casualties is based on the sampled data grossed to fires and rescue authority totals.

All percentages in the text and tables of this bulletin are calculated on unrounded figures.

Rounding and Symbols

Data collected via the FDR1 and FDR3 paper forms (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

Uses of the data

- The Welsh Government uses the information in this bulletin to monitor the trends in grassland fires occurring in Wales, for example monthly trends. 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 authorities for comparisons and benchmarking. The data aids the allocation of resources and providing community safety projects.
- The data are used by Academic Institutions and Research Councils in funded research projects.
- We judge that the quality and reliability of the data are appropriate for these uses.

National Statistics

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political reference.

Data Quality

- Data for the most recent period are provisional. Whilst the data are accurate at the time they extracted, the database is updated throughout the year, and this may result in revised data appearing in subsequent publications. Please see Revisions section for more information.
- The Fire Statistics Quality Report covers the general principles and processes leading up to the production of our fire statistics. The report covers various topics including definitions, coverage, timeliness, relevance and comparability. You can see a copy of the report on the Welsh Government website here: <http://gov.wales/statistics-and-research/fire-statistics/fire-statistics-quality-report/?lang=en>
- 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.

Disclosure

Disclosure is the result of being able to identify, directly or indirectly, and some personal or otherwise sensitive information being disclosed by the data. Although there are data held in IRS which have the potential to be disclosive we do not consider the data presented in this bulletin to require disclosure control.

More detailed quality information, which is not included in the quality report, is given below.

Comparability

- From April 2009 Fire and Rescue Authorities began using the Incident Recording System (IRS). This may affect the reporting and recording of incidents.
- Further information regarding comparability issues can be found in previous publications <http://gov.wales/statistics-and-research/grassland-fires/?tab=previous&lang=en>
- In order to assist with comparability between fire and rescue authorities, all data providers are issued with the same data collection guidance.
- In 2014-15 firefighters who are members of the Fire Brigades Union (FBU) were involved in 6 distinct periods and 2 periods of discontinuous of strike action. The strike periods in 2014-15 were as follows:
 - 2nd May 2014 (12:00 – 17:00)
 - 3rd May 2014 (14:00 – 02:00 4th May)
 - 4th May 2014 (10:00 – 15:00)
 - 12th Jun 2014 (9:00 – 9:00 13th June)
 - 21st Jun 2014 (10:00-17:00)
 - 10th Jul 2014 (10:00-19:00)
 - 14th Jul to 21st Jul 2014 - discontinuous strike action (various short periods of time (usually 2 x2 hour slots each day)
 - 9th Aug to 16th Aug 2014 – discontinuous strike action (various short periods of time each day)
- FBU members also took industrial action short of a strike throughout 2014-15. This included a refusal to work overtime in some circumstances, or to participate in certain forms of training.
- In 2013-14 firefighters were involved in 9 periods of strike action. The strike periods in 2013-14 were as follows:
 - 25th September 2013 (12:00-16:00)
 - 1st November 2013 (18:30-23:00)
 - 4th November 2013 (06:00-08:00)
 - 13th November 2013 (10:00-14:00)
 - 13th December 2013 (18:00-22:00)
 - 14th December 2013 (18:00-22:00)
 - 24th December 2013 (19:00-00:00)
 - 31st December 2013 (18:30-00:30 1st Jan 2014)
 - 3rd January 2014 (06:30-08:30)

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 impacts on the financial year in which the school holidays may fall.

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

- 2015 - Monday 30th March to Friday 10th April. Only the 30th and 31st March fall in the scope of this bulletin. Good Friday 3rd April, Easter Monday 6th April.
In academic years prior to 2014/15 Easter holidays may have varied slightly between local authorities but would have occurred around the time of Good Friday and Easter Monday
- 2014 - Good Friday 18th April, Easter Monday 21st April. School holidays would have fallen wholly in financial year 2014-15.
- 2013 – Good Friday 29th March, Easter Monday 1st April. School holidays would have partially fallen in financial year 2012-13 and partially in 2013-14.

Revisions

- This bulletin contains provisional data for 2014-15. Whilst the data are accurate at the time they extracted, the database is updated throughout the year, and this may result in revised data appearing in subsequent publications. Data for 2013-14 have been revised in this publication and are now considered final. Since IRS is a live system, incidents in 'final data' may be updated, however these revisions will not appear in published data unless in exceptional circumstances.
- The table below compares the provisional 2013-14 data extracted from IRS in May 2014 (first published in July 2014 in Fire Statistics Wales 2013-14 and the subsequent Grassland Fires 2013-14 bulletin of February 2015), with the revised data (extracted in June 2015) which appeared in Fire Statistics Wales 2014-15 and is contained in this bulletin. No revision was necessary to the total number of primary fires. There were minor revisions to 2013-14 secondary fires data, as seen below.

Comparison of provisional data with revised data (2013-14)

	Provisional 2013-14 Published in July 2014	Revised 2013-14 Published in July 2015	Percentage change
Primary grassland, woodland and crop fires	128	128	0.0
Secondary grassland, woodland and crop fires	3,747	3,748	0.0

Percentage changes for revised data

	2010-11	2011-12	2012-13	2013-14
Primary grassland, woodland and crop fires	1.8	0.4	3.3	0.0
Secondary grassland, woodland and crop fires	-1.8	0.1	0.0	0.0

- The schedule below indicates when data will be revised and finalised.

Data to be revised	When revisions will be made
Fatalities and Casualties	Revised 2014-15 figures to appear in quarterly headline relating to April 2015 – September 2015. (Typically published in January 2016) Final 2014-15 figures (barring exceptional circumstances) to appear in quarterly headline relating to October 2015 – March 2016 and annual bulletin (Fire Statistics Wales 2014-15). (Typically published in June and July 2016 respectively)
Incident data	Final 2014-15 figures (barring exceptional circumstances) to appear in quarterly headline relating to October 2015 – March 2016 and annual bulletin (Fire Statistics Wales 2015-16). (Typically published in June and July 2016 respectively)

- Revised data are marked with an (r) in the statistical bulletin.
- We follow the Welsh Government's statistical revisions policy, details of which are available at: <http://gov.wales/statistics-and-research/about/statement-of-compliance/revisions-errors-postponements/?lang=en>

Related Statistics for Other UK Countries

General Fire incident statistics for other UK countries are available at the following links:

- **England:** The Department for Communities and Local Government in England produce an annual bulletin , Fire Statistics Great Britain, 2013 to 2014:
<https://www.gov.uk/government/collections/fire-statistics-great-britain>
The publication refers to outdoor fires in chapter 5.
- **Scotland:** Annual fire statistics bulletin, 2013-14 is available at:
<http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/PubFires>
The bulletin refers to outdoor fires in section 4.6, and tables 9 and 9a.
- **Northern Ireland:** Annual fire incident data are available from: <http://www.nifrs.org/statistics/>

Further information

More information is available in the form of StatsWales tables that accompany this release and can be found at <https://statswales.wales.gov.uk/Catalogue/Community-Safety-and-Social-Inclusion/Community-Safety/Fire-Incidents>

or by contacting:

stats.inclusion@wales.gsi.gov.uk

Analysis of annual Welsh fire incident data can be found in the bulletin 'Fires Statistics, 2014-15':
<http://gov.wales/statistics-and-research/fire-statistics/?lang=en>

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

The link below shows an Evaluation of the Arson Prevention Programme which focuses on three of the main initiatives; Arson Reduction Teams (ARTs); the Arson Small Grants Programme; and the Grassland Fire Initiative.

<http://gov.wales/about/aboutresearch/social/latestresearch/EvalArson/?lang=en>

Operation Phoenix: a partnership initiative aimed at reducing the number of grass fires in the Rhondda Valleys over Easter involving South Wales Fire and Rescue Service, South Wales Police, the Forestry Commission and Rhondda Cynon Taf (RCT) County Borough Council.

We actively encourage feedback from our users. If you have any comments or require further information please contact us on the details below.

Social Justice and Community Safety Statistics

Welsh Government,

Cathays Park,

Cardiff, CF10 3NQ.

Tel: (029) 2082 6699

Fax: (029) 2082 5350

E-mail: stats.inclusion@wales.gsi.gov.uk



All content is available under the Open Government Licence v3.0 , except where otherwise stated.

<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Annex 1: Grassland fire data available on Statswales

- Primary and secondary grassland, woodland and crop fires by month and financial year:

<https://statswales.wales.gov.uk/Catalogue/Community-Safety-and-Social-Inclusion/Community-Safety/Fire-Incidents/Fires-and-False-Alarms/PrimaryAndSecondaryGrasslandWoodlandAndCropFires-by-Month-FinancialYear>

- Casualties by detailed location and financial year:

<https://statswales.wales.gov.uk/Catalogue/Community-Safety-and-Social-Inclusion/Community-Safety/Fire-Incidents/Casualties/Casualties-by-DetailedLocation-FinancialYear>

The attached link filters to the grassland, woodland and crop fires data:

<https://statswales.wales.gov.uk/v/6YX>

- Accidental primary fires by cause and source of ignition (information only available at the high level, i.e. not available at the primary grassland, woodland and crop fires level):

<https://statswales.wales.gov.uk/Catalogue/Community-Safety-and-Social-Inclusion/Community-Safety/Fire-Incidents/Fires-and-False-Alarms/AccidentalPrimaryFires-by-Cause-SourceIgnition>

- Fires by detailed location and motive:

<https://statswales.wales.gov.uk/Catalogue/Community-Safety-and-Social-Inclusion/Community-Safety/Fire-Incidents/Fires-and-False-Alarms/Fires-by-DetailedLocation-Motive>

The attached link filters to the grassland, woodland and crop fires data:

<https://statswales.wales.gov.uk/v/6YY>