



Department for  
Communities and  
Local Government

# Fire Statistics: Great Britain

## April 2012 to March 2013

- Fire and Rescue Authorities in Britain attended 192,600 fires in 2012-13. This is nearly a third fewer than the year before, due to fewer outdoor fires as a result of above average rainfall.
- While only 12 per cent of dwellings report not having a working smoke alarm in England, more than one third of fires occurred in dwellings in Great Britain where no alarm was installed.
- Three quarters of fire-related fatalities occurred in dwelling fires, the figure fell by 11 per cent (32 deaths) compared to 2011-12.
- Smoker's materials (i.e. cigarettes, cigars or pipe tobacco) have caused the largest share of deaths in dwelling fires, while cooking appliances are the source of ignition in more than half of fires in dwellings.
- Half of fire deaths in buildings that were not dwellings resulted from smoker's material or cigarette lighters.
- The risk of dying in a fire for elderly people (65 and over) is over twice as high as the average for all ages.
- In the year to 2012-13 fire fatalities rates fell by 10% in England and by over 20% in Scotland and Wales. Scotland continued to have a higher rate of fire deaths compared to both England and to Wales.
- Males have higher rates of fire fatality than females, but the gender gap in fire fatality rate narrowed in 2012-13.



Fire & Rescue  
*Statistical Release*

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### Date of next publication:

December 2014

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23 May 2014

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ISBN: 978-1-4098-4211-8

# 1. Introduction

The statistics in this publication are compiled from Fire and Rescue Service records of incidents attended by fire and rescue authorities across Great Britain<sup>1</sup>.

This publication contains detailed analysis of fires, casualties and their causes for 2012-13. Headline data for 2012-13 was published in June 2013 in the Fire Statistics Monitor series.

This is the third edition of this publication using data since the new Incident Recording System was adopted. Incomplete records from one Fire and Rescue Authority meant that it was not possible to produce some of the more detailed statistics for 2009-10.

The notes and definitions section at the rear of the publication provide definitions and context, including signposting to some changes to the detailed categories which fed into statistics as of this edition of this publication. The impact on data tables was very minor, but these are nevertheless flagged up for information at the end of the definitions section.

This publication follows the content and order of previous editions as far as possible in order to be consistent for those familiar with previous editions.

In response to user comments enquiring into the composition of various categories in the data tables of this publication, a workbook showing the combinations of these has been produced

We are keen to hear from users to broaden our knowledge of all the various uses to which these statistics are put, and as to what other analyses would be valuable in the future. Please see the user interests form which can be downloaded from <https://www.gov.uk/government/publications/fire-statistics>.

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<sup>1</sup> Until 2008, this was a UK publication. Since then it has covered Great Britain. This is because the new Incident Recording System with electronic data capture and transfer was adopted by Fire and Rescue Authorities across Great Britain in 2009.

## 2. Key points

### Fires and false alarm

In 2012-13 fire and rescue authorities attended 487,000 fires or false alarms in Britain. This was 17% fewer than in 2011-12 ([para1.1](#)).

- Fire and Rescue authorities attended a total of 192,600 fires in 2012-13, 29% fewer than in the previous year. Almost two thirds (62%) of these were outdoor fires (119,700), e.g. refuse, road vehicles, grassland and heathland. Over one fifth (22%) were dwelling fires, and these were 6% down compared to 2011-12.
- The number of false alarms fell by 6% to 294,800 in 2012-13 from 313,300 in 2011-12 ([para1.7](#)).

### Fatalities from fires

- In 2012-13, there were 350 fire-related deaths in Britain, 47 fewer than in 2011-12 and lower than in any year in the last fifty years. The highest number of fatalities recorded was 967 in 1985-86. Throughout the 1990s and 2000s there was a clear downward trend. ([para1.10](#)).
- Three quarters (76%) of fire-related fatalities occurred in dwelling fires ([para1.11](#)). In 2012-13 there were 266 dwelling fire fatalities, 32 fewer than in 2011-12. Fire fatality rates are four times higher for people aged 80 and over, compared to the rate across all ages. The gap in fatality rates between male and female narrowed in 2012-13. ([paras1.14](#) & [1.15](#)).
- 34% of fire-related deaths in Britain were caused by the victim being overcome by gas, smoke or toxic fumes. The other leading causes are burns alone (30%) and combination of burns and being overcome by gas or fumes (19%).

### Non-fatal casualties

- There were 10,300 non-fatal casualties in fires in Britain in 2012-13, 10 per cent and 32 per cent lower compared to the previous year and ten years before respectively ([para1.16](#)).

### Dwelling Fires

- There were 41,000 dwelling fires in Britain in 2012-13, 6% fewer than in 2011-12. 36,400 (89%) of dwelling fires were *accidental* ([paras2.1](#) & [para2.2](#)).

### Accidental dwelling fires

- Accidental dwelling fires were 4% and 22% lower in Britain in 2012-13 compared to the previous year and ten years before respectively. The main cause of accidental dwelling fires remained the misuse of equipment/appliances (13,900 fires), while the main source of ignition was cooking appliances which accounted for more than half of all accidental dwelling fires) ([paras2.3](#) & [para2.4](#)).

## **Fatalities in dwelling fires**

- Of the 266 deaths in dwellings in 2012-13, 217 (82%) were of accidental causes. The main cause was careless handling of fire or hot substances (e.g. careless disposal of cigarettes), which accounted for 40% of all fatalities due to accidental causes (para 2.7 & 2.8). More than half of accidental dwelling fire deaths resulted from fires which started in the living room or dining room. ([paras2.8,2.9,&2.24](#)).
- Dwelling fires in which textiles, upholstery and furnishings were mainly responsible for the development of the fires, accounted for nearly 60% of deaths in dwelling fires.

## **Smoke alarms status in dwelling fires**

- No smoke alarm was present in 12,800 (31%) dwelling fires ([para2.29](#)). A smoke alarm was present but did not operate in 19% of dwelling fires.
- Smoke alarm ownership increased rapidly from 8% in 1988 to 70% in 1994 in England, and has continued to rise in recent years to 88% in 2011 ([para2.30](#)).
- Nearly a third of dwelling fire deaths occurred in properties where no alarm was installed.

## **Other Building Fires**

In 2012-13 there were 22,500 fires recorded in buildings that were not dwellings, these were 18% and 41% fewer than in 2011-12 and 2002-03 respectively. The majority of these occurred in non-residential buildings (e.g. retail units, pubs/wine bars/cafés/take aways, private garden sheds and industrial manufacturing plants) ([paras3.1& 3.3](#)).

- In total, 17 fatal and 1,013 non-fatal casualties occurred in fires in buildings other than dwellings ([para3.2](#)).
- 65% of deaths occurred in other building fires where there was no smoke alarm.

## **Road Vehicle Fires**

- There were 23,900 road vehicle fires in 2012-13 – 15% fewer than 2011-12. This was the lowest in more than a decade and 76% lower than the peak in 2001/02 (para 4.1). Road vehicle fires resulted in 39 deaths in 2012-13, 2 more than in 2011-12 but 25 fewer than a decade ago in 2002-03. ([para4.4](#))

# Chapter 1 - Fires, false alarm and fatal and non-fatal casualties

## Total number of fires and false alarms attended by fire and rescue authorities (Tables 1.1, 1.2 and Figure 1.1)

1.1 In 2012-13, local authority fire and rescue services attended 487,000 fires or false alarms in Britain, 17% fewer than in 2011-12 (586,000). This is nearly 50% fewer than ten year earlier. Within this total, fires decreased by 29% to 193,000, while false alarms fell by 6% to 295,000. The number of outdoor fires has declined by 38% in 2012-13. The unusually low number of outdoor fires is due to above average rainfall in spring and summer of this period.

**Table 1.1: Fires by location and false alarm, Great Britain, 2000/01-2012/13p**

Year	Total fires & false alarms	Total Fires	Building fires <sup>1</sup>			Outdoor Fires <sup>3</sup>	Chimney fires	False alarms
			Total	Dwellings <sup>2</sup>	Other			
2000/01	895	445	107	67	40	324	14	450
2001/02	992	525	109	67	42	404	12	467
2002/03	949	503	98	60	38	395	10	447
2003/04	1,028	572	102	62	40	460	9	456
2004/05	845	412	93	57	36	311	8	433
2005/06	832	409	90	56	34	310	9	423
2006/07	838	411	86	54	32	318	8	426
2007/08	770	364	80	50	29	276	9	406
2008/09	694	309	74	47	26	225	11	385
2009/10	654	299	74	47	27	216	10	354
2010/11	627	288	74	46	28	204	10	339
2011/12r	586	273	71	44	27	194	8	313
2012/13p	487	193	64	42	22	120	9	295

<sup>1</sup> Includes fires in derelict buildings (which are shown separately see annex table 1c). Many other tables are for 'primary' fires only and as such exclude most fires in derelict properties)

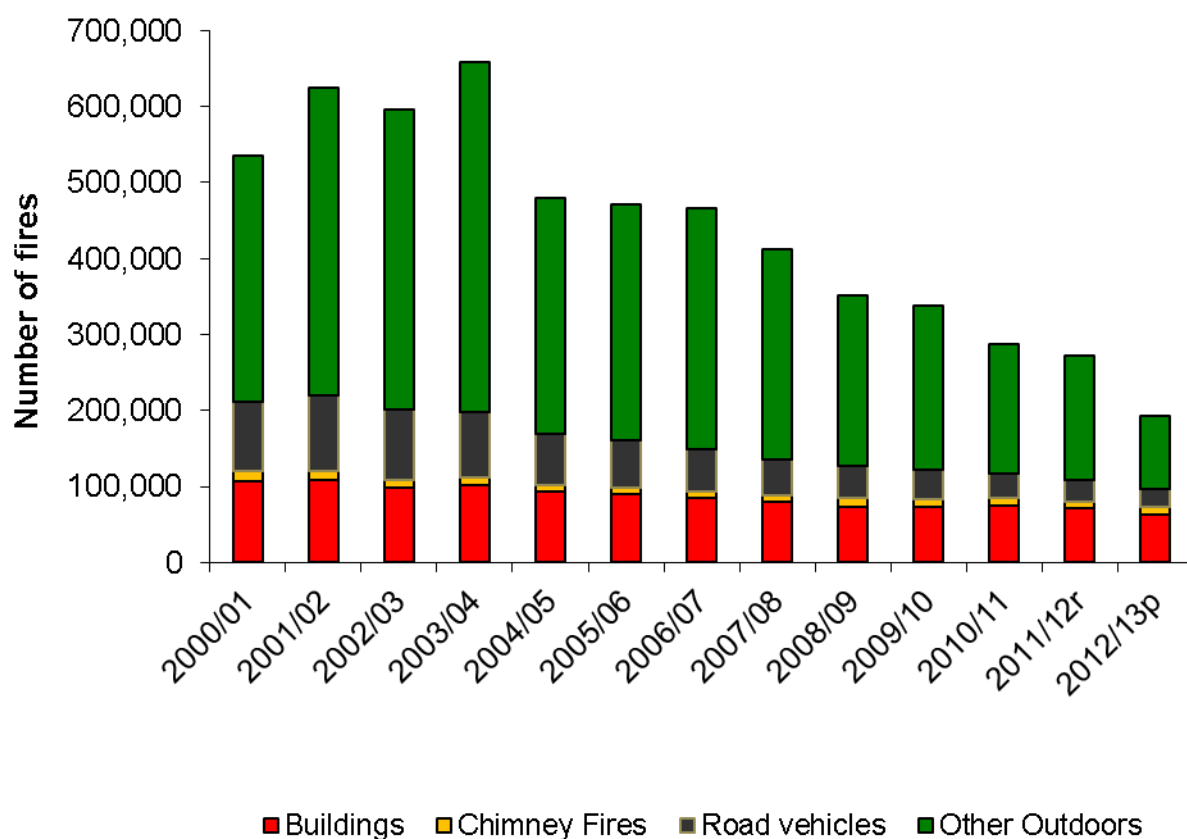
<sup>2</sup> Includes caravans, houseboats, mobile homes and other non-permanent structures used solely as a permanent dwelling.

<sup>3</sup> Primary and secondary fires; p= provisional; r= revised

Figures in thousand and figures are rounded and the components do not necessarily sum to the independently rounded totals

1.2 A total of 192,600 fires were attended in 2012-13, of which 41,000 (21%) were in dwellings. Findings from the 2004/05 Survey of English Housing on all outbreaks of fire experienced by households in England suggested that fire and rescue services attend approximately one fifth of all domestic fires. This is because many of the fires recorded in the survey are minor and the fire and rescue service was not called. See ODPM Statistical Bulletin – “Fires in the home: Findings from the 2004/05 Survey of English Housing”. ([Explanatory notes 10](#) for further details.)

**Figure 1.1: Primary fires by location group and chimney fires, Great Britain, 2000/01 – 2012/13p**



p=provisional; r= revised

- 1.3 The number of building fires declined by 11% from 71,200 in 2011-12 to 63,600 in 2012-13. This is the lowest figure recorded over the past decade. Within this category, dwelling fires fell by 6% to 41,000. Fires in buildings that are not dwellings (mostly other residential) also fell, by 18% to 22,500.
- 1.4 There were 119,700 outdoor fires<sup>2</sup> in 2012-13. Of these 57,000 (47%) were refuse fires, 24,500 (20%) were road vehicle fires and 23,000 (19%) were grassland fires (including tree scrub, domestic garden, heath land and intentional straw and stubble burning). The remaining 21,200 (18%) were in other outdoor locations (including park and outdoor equipment/machinery or furniture).
- 1.5 The number of chimney fires was by 22% higher at 9,400 in 2012-13 compared to 7,700 in 2011-12.

<sup>2</sup> All fires – includes primary as well as secondary fires. For definition of Primary and Secondary fires, see overleaf and explanatory notes 5 and 6 for the definition of a primary and secondary fire

## Definitions: primary fires, secondary, chimney fires, outdoor fires

“Primary” fires include all fires in buildings, vehicles and outdoor structures or any fire involving casualties, rescues, or fires attended by five or more appliances.

“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.

Chimney fires are any fire in an occupied building where the fire was confined within the chimney structure (and did not involve casualties or rescues or attendance by five or more appliances). A false alarm is defined as an event in which the fire and rescue service believes they are called to a reportable fire and then find there is no such incident.

The term “outdoor fires” used in this Bulletin refers to primary and secondary fires in road vehicles, other outdoor property, derelict buildings and derelict vehicles and more minor refuse, grassland and intentional straw/stubble fires.



## Causes of fires

### Interpretation of trends in accidental and deliberate fires

- 1.6 Fires are categorised as: accidental, deliberate or unknown, according to the probable cause, as observed at the scene. Those recorded as 'unknown' are grouped together with 'accidental' for all outputs. In 2012-13, there were 90,500 primary fires in Great Britain. Among those, 40% were accidental dwelling fires. Table 1.2 shows the numbers of accidental and deliberate fires by location types.

**Table 1.2: Primary fires<sup>1</sup> by cause and location of fire, Great Britain, 2000/01- 2012/13p**

Cause/Year	Total <sup>1</sup>	Location					
		Dwellings	Total other buildings	Other buildings		Road vehicles	Other outdoors
				Other residential <sup>3</sup>	Non-residential		
<b>Accidental fires<sup>2</sup></b>							
2000/01	103.5	54.1	22.8	..	..	23.0	3.6
2001/02	100.9	52.2	22.8	..	..	22.0	3.9
2002/03	92.2	47.1	21.5	..	..	19.6	4.0
2003/04	94.1	48.5	22.1	..	..	19.1	4.4
2004/05	87.6	46.1	21.1	..	..	17.1	3.4
2005/06	87.0	46.1	20.5	..	..	16.8	3.6
2006/07	84.7	44.2	19.4	..	..	16.9	4.2
2007/08	78.7	41.8	18.0	..	..	15.3	3.5
2008/09	74.9	39.6	16.9	..	..	14.9	3.5
2009/10	79.0	40.3	18.0	..	..	16.5	4.2
2010/11	75.8	38.7	17.6	3.2	14.4	15.5	3.9
2011/12r	72.5	37.7	16.9	2.9	13.9	14.1	3.9
2012/13p	66.9	36.4	14.6	2.6	12.0	13.2	2.6
<b>Deliberate fires<sup>2</sup></b>							
2000/01	106.0	13.3	17.1	..	..	67.9	7.7
2001/02	120.6	14.3	19.4	..	..	77.8	9.1
2002/03	111.5	12.6	16.7	..	..	73.4	8.9
2003/04	107.8	13.2	18.3	..	..	67.0	9.2
2004/05	84.4	11.0	14.7	..	..	50.8	7.9
2005/06	74.8	9.8	13.3	..	..	44.7	7.1
2006/07	67.7	9.5	12.4	..	..	38.6	7.2
2007/08	57.8	8.6	11.1	..	..	32.3	5.8
2008/09	49.7	7.9	9.2	..	..	27.5	5.2
2009/10	43.6	6.9	8.5	..	..	22.0	6.2
2010/11	36.1	6.3	7.4	0.4	7.0	17.1	5.3
2011/12r	32.6	5.9	7.4	0.4	6.9	14.0	5.3
2012/13p	23.7	4.6	5.3	0.3	4.9	10.6	3.1

1 Figures are expressed in thousand and figures are rounded and the components do not necessarily sum to the independently rounded totals.

2 Deliberate fires include fires where deliberate ignition was merely suspected. Accidental fires include those where the cause was accidental

3 includes residential care homes, hotel/motel, hostels (for homeless people), boarding school accommodation and sheltered housing

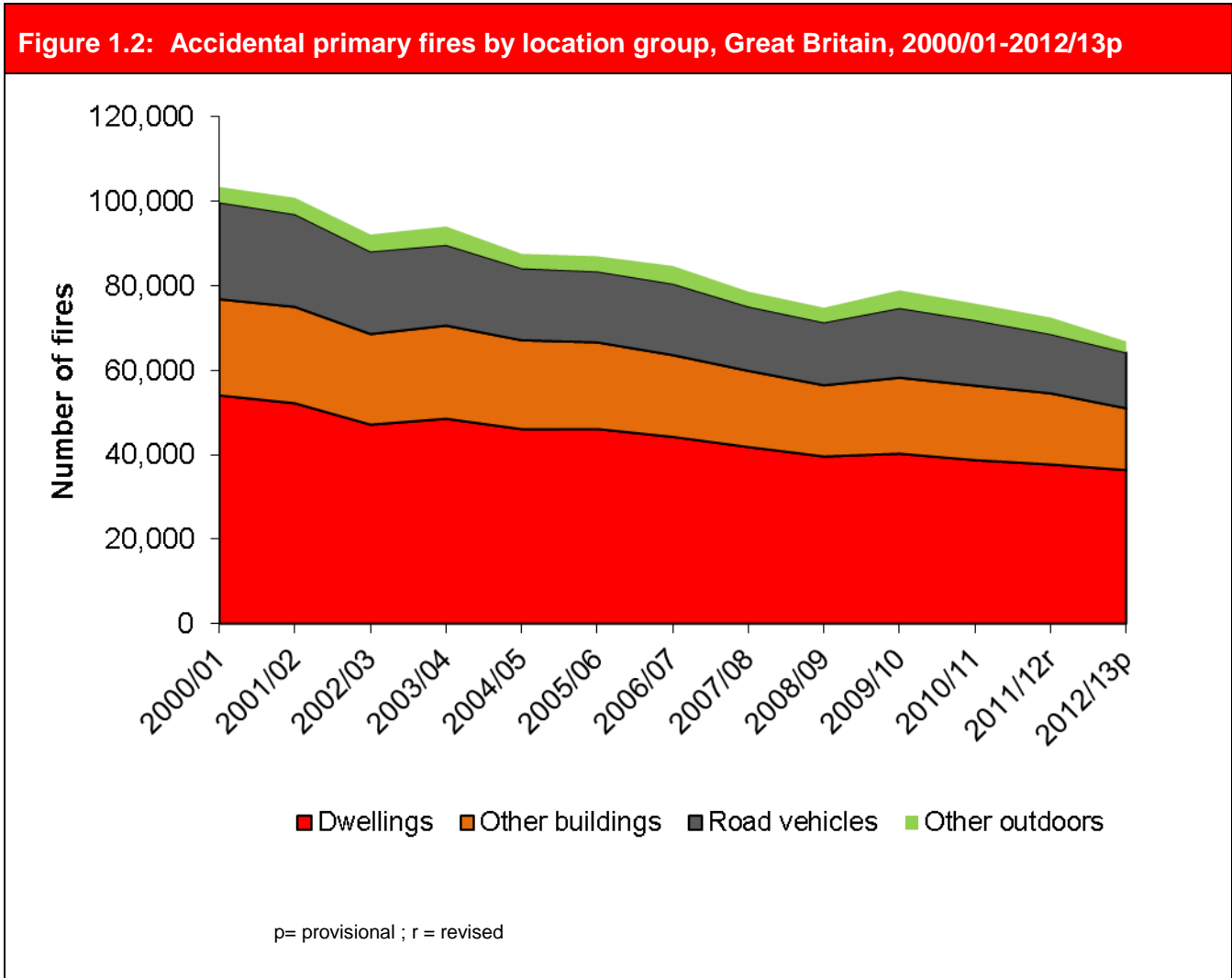
.. 'not known' or 'unspecified' (see explanatory notes); p= provisional; r=revised

**Accidental primary fires (Table 1.2, Figure 1.2)**

1.7 Accidental primary fires have been on a steady decline since the decade peak in 2000/01 and the 2012/13 figure declined by more than one third compared to 2000/01. There were 66,900 accidental primary fires in Great Britain in 2012-13. This was 8% lower than in the previous year. Of the total accidental fires, more than half (54%) were in dwellings, 22% in other buildings (mostly non-residential properties), 20% in road vehicles and 4% in other outdoors.

The key changes in 2012-13 from 2011-12 were:

- Accidental fires in dwellings fell by 4% to 36,400;
- Accidental fires in non-residential buildings fell by 14% to 12,000;
- Accidental fires in road vehicles also down by 6% to 13,200.



## Deliberate primary fires (Tables 1.2 and 14 and Figure 1.3)

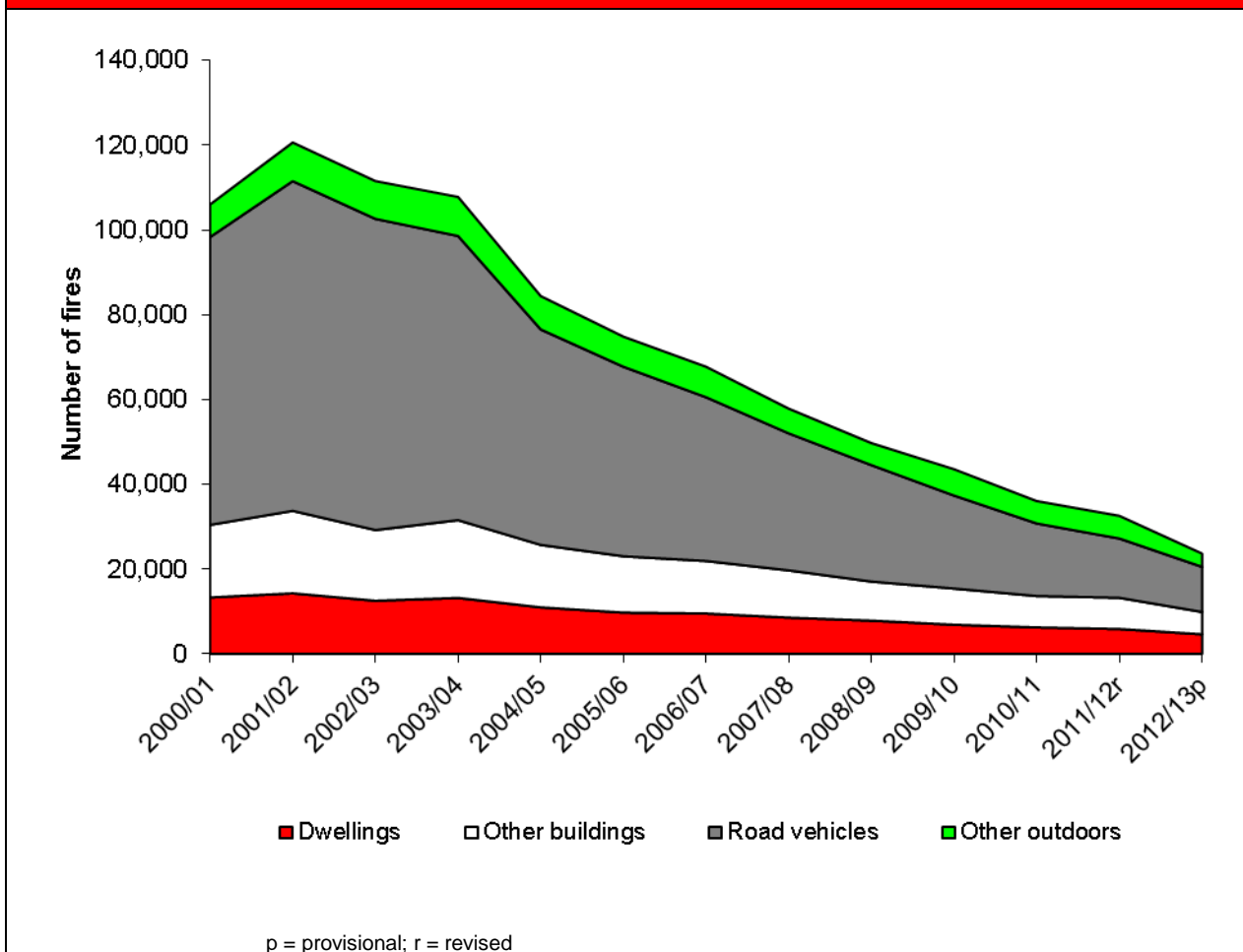
1.8 The number of deliberate primary fires has been on a steady decline since the peak in 2001/02. In 2012-13, the number of deliberate fires was 23,700 – declined by 27% from 32,600 in 2011-12. About 45% of deliberate fires occurred in road vehicles.

There was a decline in deliberate fires in all locations:

- Deliberate fires in dwellings fell by 21% to 4,600
- Deliberate fires in other buildings fell by 28% to 5,300
- Deliberate fires in road vehicles also fell by 24% to 10,600

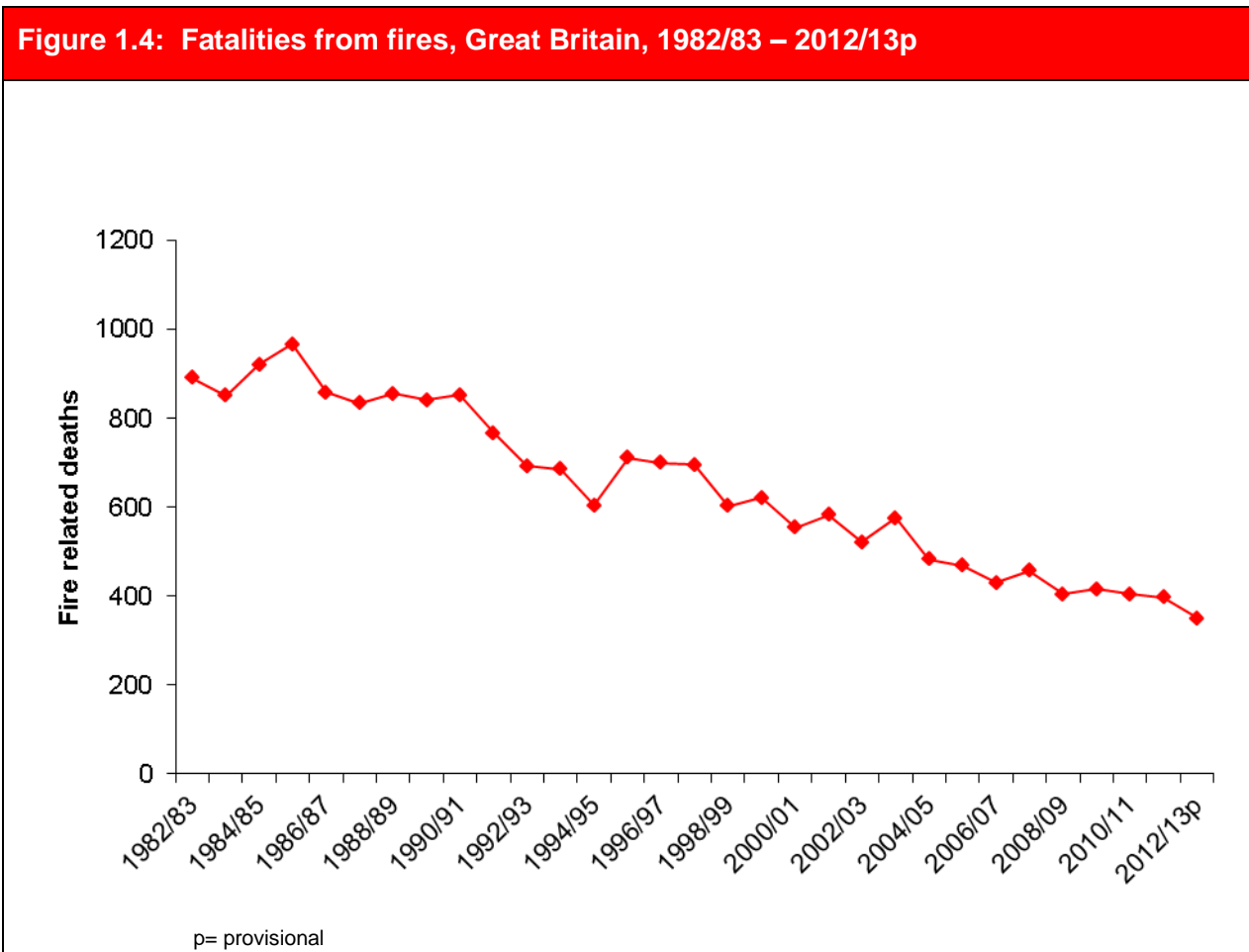
1.9 Of the 9,900 deliberate fires in buildings recorded in 2012-13, more than half (53%) occurred in buildings that were not dwellings. Of these 5,300 deliberate fires in other buildings, nearly a third occurred in private garages or garden sheds, green houses or summer houses. Chapter 3 contains further details of deliberate fires in other buildings.

**Figure 1.3: Deliberate fires by location group, Great Britain, 2000/01 – 2012/13p**



## Fatalities from fires (Table 6, 17a, 26 and Figure 1.4)

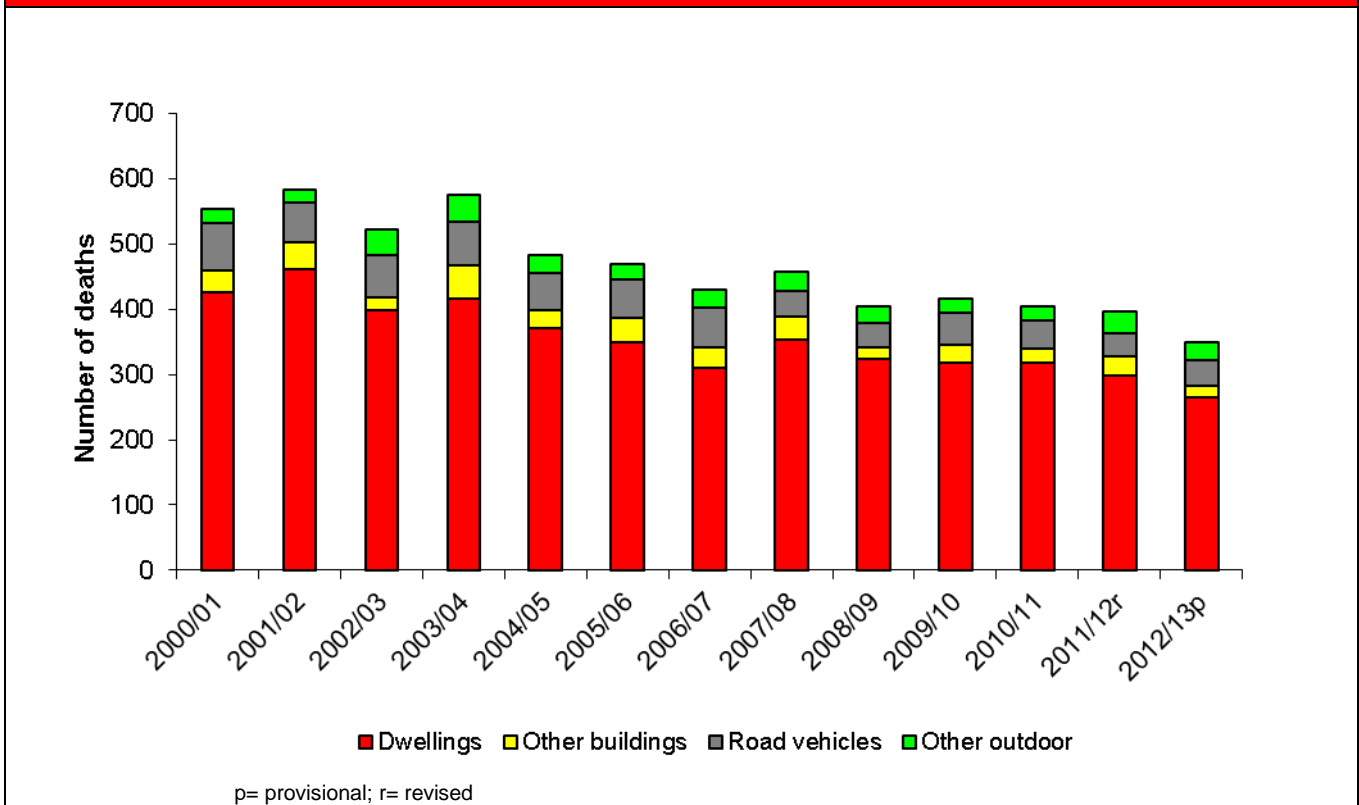
1.10 In 2012-13, there were 350 fire-related fatalities in Britain, a reduction of 47 from the 2011-12 figure of 397. The long term trend in fire fatalities has been downward.



## Location (Tables 6 and 26, Figure 1.5)

- 1.11 The majority of fire-related fatalities (over three-quarters) occurred in dwelling fires. In 2012-13, there were 266 fatalities in dwelling fires, 32 fewer than in 2011-12, 132 fewer than 10 years ago in 2002-03 and 479 fewer than 30 years ago in 1981-82. About one-fifths of deaths occurred in outdoors including road vehicles. Road vehicle fire deaths have been declined by 64% in 2012-13 compared to the peak of 109 in 1989/90.
- 1.12 In 2012-13, there was 6.5 fatality rate per 1,000 dwelling fires compared to 1 per 1,000 other building fires and 1.6 per 1,000 road vehicle fires.

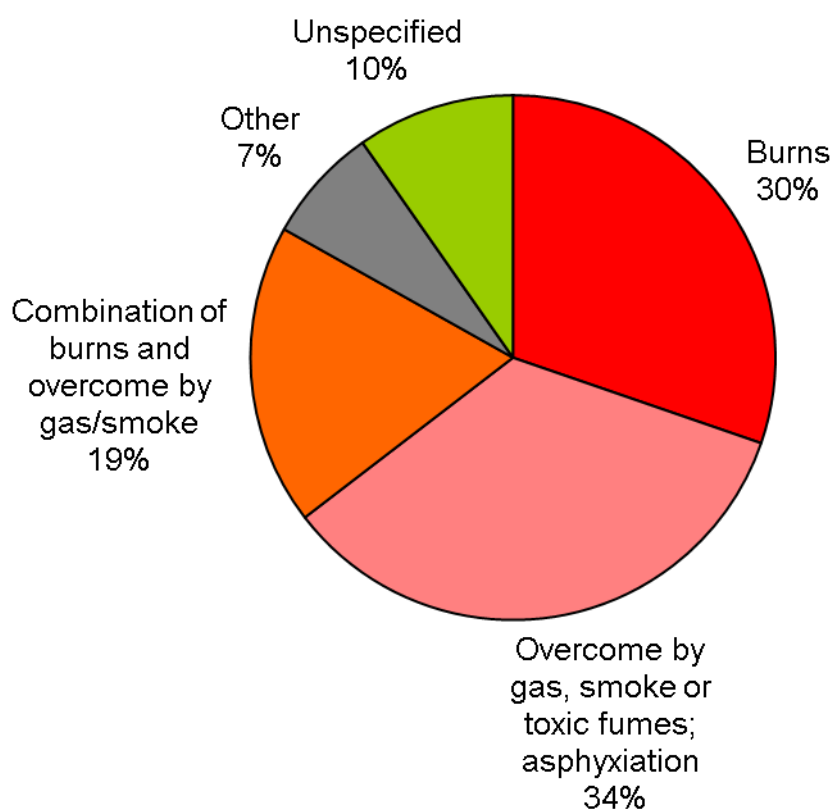
**Figure 1.5: Fatalities from fires by location group, Great Britain, 2000/01 – 2012/13p**



## Cause of death (Table 7, Figure 1.6)

- 1.13 The most common identified cause of death from a fire incident is being overcome by gas or smoke or toxic fumes. In 2012-13, fire and rescue authorities reported 350 fire-related fatalities of which 120 people died because of this cause, accounting for 34% of all fatalities. A further 105 (30%) deaths were due to severe burns alone whilst 19% (65 deaths) were attributed jointly to both burns and being overcome by gas or smoke.

**Figure 1.6: Cause of fire deaths, Great Britain, 2012/13p**



'Note: Other' includes head/chest pain or other physical injuries, fractures, shock or other medical conditions  
p=provisional

## Fatality rates by age and gender (Tables 5b, 17a, 17b and 1.3)

- 1.14 The fire fatality rate is defined as the number of fatalities per million population, abbreviated henceforth to pmp.
- 1.15 In 2012-13 the fatality rate for victim under thirty year old is much below average, and the rate is higher than average for the age groups 60-64 and 65-79, and by far the highest in the age group 80 and over (24 pmp, accounting for 20% of total deaths). Fatality rates are higher for males than for females (6 pmp and 5 pmp for males and females respectively in 2012-13) but the gap of fire fatality rates between males and females is narrowed in 2012-13.

**Table 1.3: Fatal casualties<sup>2</sup> and rates from fires by age and gender, Great Britain, 2007/08-2012/13p**

Year	Number of fatalities						Rate <sup>1</sup>					
	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13
<b>Age of victims</b>												
under 1	4	3	-	5	0	3	5	4	-	6	0	4
1 – 4	7	6	-	6	8	5	3	2	-	2	3	2
5 – 10	3	8	-	12	7	8	1	2	-	3	2	2
11 – 16	4	5	-	0	3	3	1	1	-	0	1	1
17 – 24	28	24	-	17	16	16	4	4	-	0	2	2
25 – 29	24	15	-	10	10	15	6	4	-	2	2	4
30 – 59	190	155	-	170	162	120	8	6	-	9	7	5
60 – 64	30	24	-	33	27	23	9	7	-	9	7	7
65 – 79	89	88	-	77	78	75	13	13	-	11	11	10
80 & over	66	74	-	74	83	70	25	27	-	26	29	24
Unspecified	13	10	-	3	3	12	..	..	..	..	..	..
<b>All ages</b>	<b>458</b>	<b>412</b>	<b>416</b>	<b>404</b>	<b>397</b>	<b>350</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>6</b>
<b>Gender<sup>3</sup></b>												
Males	284	249	-	241	244	197	10	9	-	8	8	6
Females	174	158	-	160	149	144	6	5	-	5	5	5
Unspecified	0	5	-	3	4	9	-	-	-	-	-	-

<sup>1</sup> The per million population rates for all years take into account the revised mid-year population estimates published by the Office for National Statistics in June 2011 (see explanatory notes).

<sup>2</sup> Includes some fatal casualties, whose gender was not recorded.

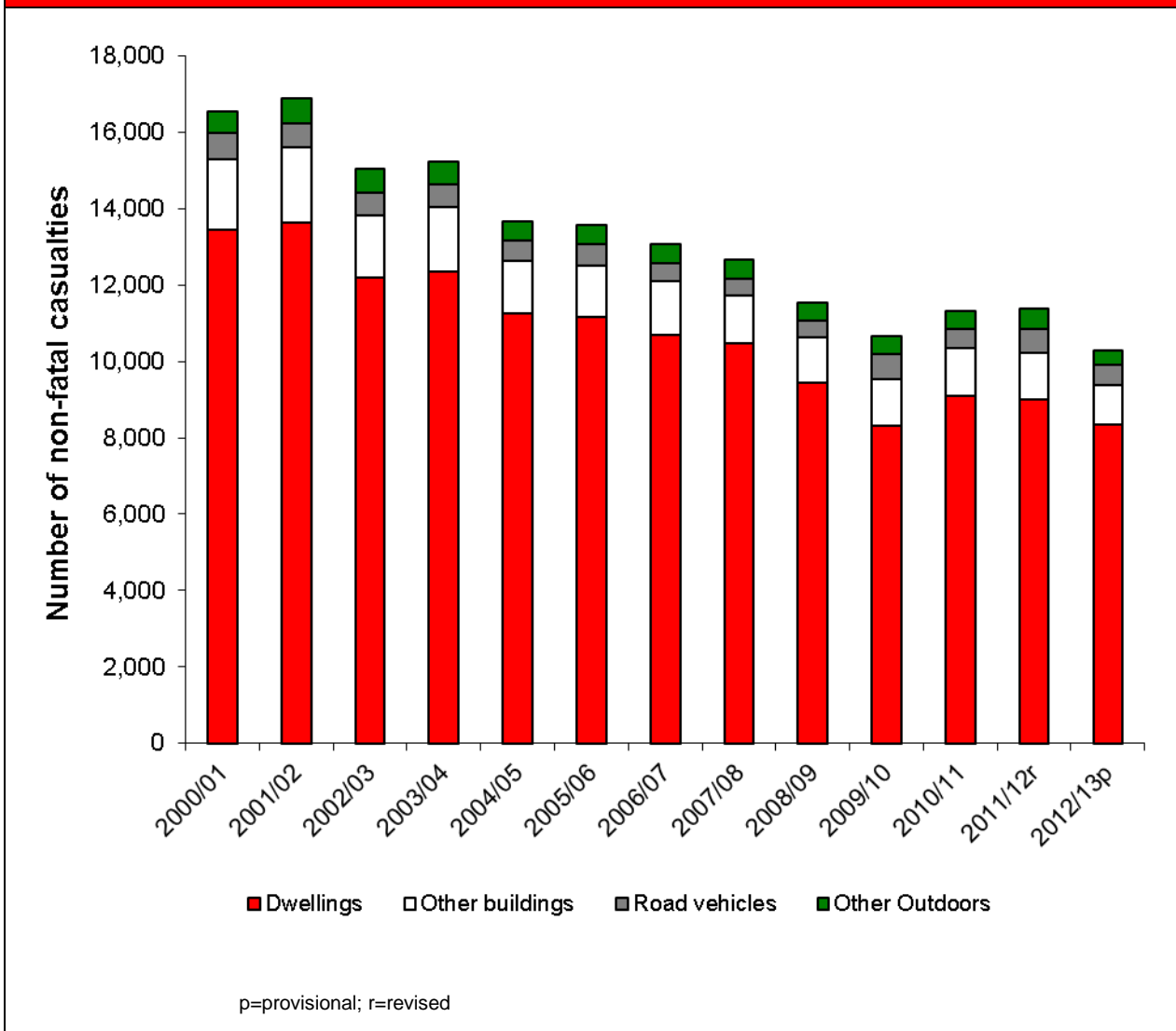
- Data not available due to incomplete record from one fire and rescue authority in 2009/10; p= provisional

## Non-fatal casualties

### Location (Table 6, Figure 1.7)

- 1.16 There were 10,300 non-fatal casualties in Britain in 2012-13. Of these, dwelling fires accounted for the majority (81%) of these casualties. In 2012-13, there were 8,300 non-fatal casualties in dwelling fires. This is 7% fewer than the previous year and 32% fewer than a decade ago in 2002-03. Britain experienced a fall in non-fatal casualties in other locations in 2012-13 compared to a year earlier.

**Figure 1.7: Non-fatal casualties by location group, Great Britain, 2000/01-2012/13p**



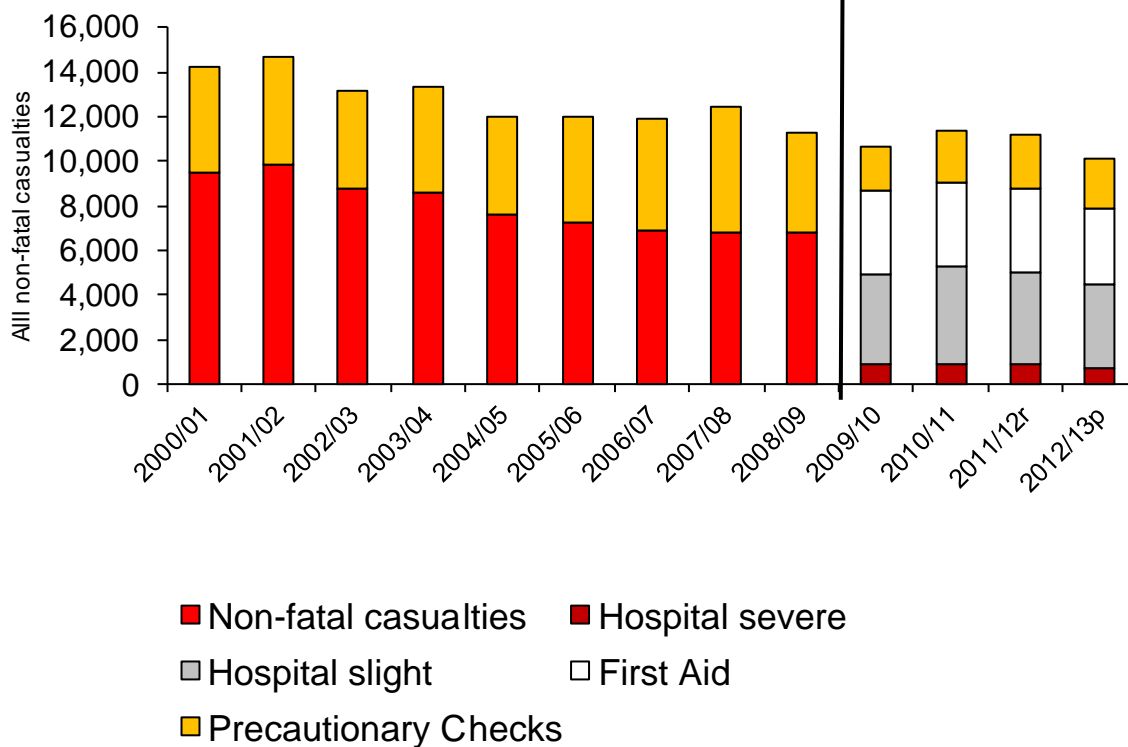
- 1.17 Similarly, dwelling fires had more non-fatal casualties per 1,000 fires than any other location. In 2012-13, there were 203 non-fatal casualties per 1,000 dwelling fires, compared with 52 per 1,000 other building fires and 23 per 1,000 road vehicle fires.



## Severity of injury (Figure 1.8)

1.18 The introduction of the new Incident Recording System (IRS) has led to a change in the way that non-fatal casualties are categorised. These changes to categories are explained in the section on '[Comparability](#)' in the Explanatory Notes at the back of this publication. In 2012-13, the most frequent non-fatal injury severity (excluding fire fighter) recorded was 'victim to hospital with slight injuries', accounting for 37% of the total, 11% lower than in the previous year. Hospital non-fatal casualties with serious injuries was down by 15% to 756 in 2012-13, from 889 in 2011-12.

**Figure 1.8: Non-fatal casualties from fires by severity, Great Britain, 2000/01-2012/13p**



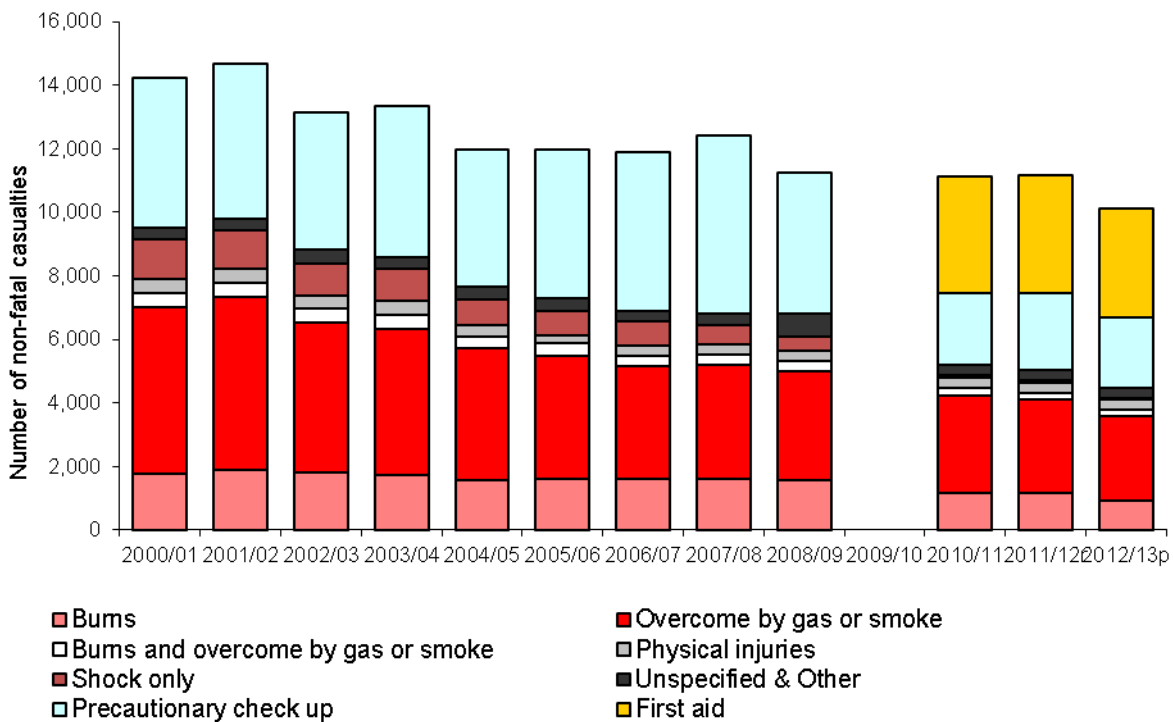
p=provisional; r= revised

## Nature of injury (Table 8, Figure 1.9)

1.19 The types of injuries that victims sustained included:

- Suffering from the effects of gas or smoke, totaling about 2,652 and accounting for more than a quarter of all non-fatal casualties in 2012-13
- Burn injuries only (including severe and slight injuries) totaled 942 (9% of all non-fatal casualties).
- Suffering from both burns and having been overcome by gas or smoke totaled 178 (2% of all non-fatal casualties).
- Physical injuries from fires totaled 326 (3% of all non-fatal casualties in 2012-13)

**Figure 1.9: Non-fatal casualties from fires (excluding firefighter casualties) by nature of injury<sup>1</sup>, Great Britain, 2000/01-2012/13p**



<sup>1</sup> There was no category for 'first aid' prior to the introduction of the new Incident Recording System (see explanatory note 3)

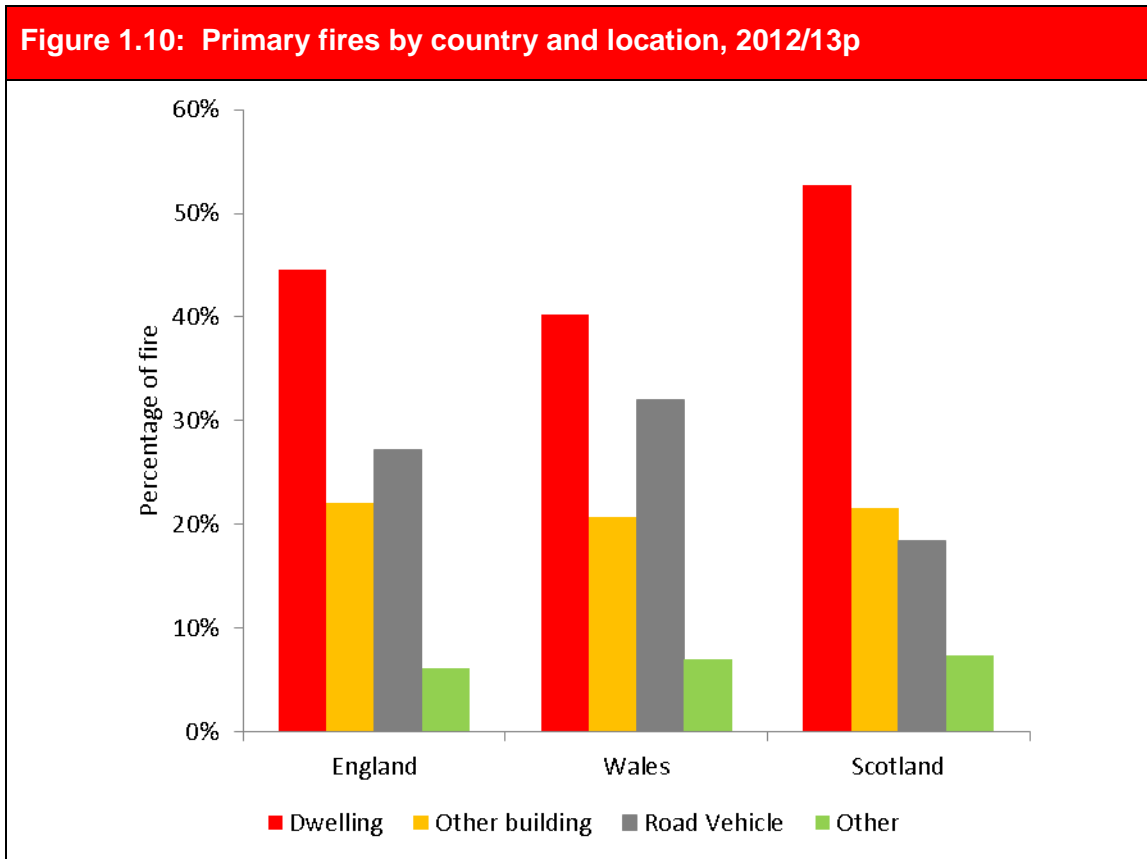
2009/10 figure was not shown due to incomplete record from one fire and rescue authority

p=provisional; r= revised

## Type of fires and country

### Primary fires (Table 5a and Figure 1.10)

- 1.20 Britain experienced a 14% decline in the number of primary fires attended by fire and rescue services in 2012-13 (see [Explanatory note 5](#) for definition of a primary fire) compared to 2011-12. Within Britain, Wales experienced the largest decrease. In England, the number of primary fires fell by 14% from 87,000 in 2011-12 to 74,700 in 2012-13, while Wales saw a 17% decline to 4,700 in 2012-13. The number of primary fires in Scotland fell by 11% to 11,000.



- 1.21 Figure 1.10 shows the primary fires by country and locations. The location profile of primary fires differs between countries. In Scotland, more than half of all primary fires were in dwellings, compared with smaller proportions in England (45%) and in Wales (40%). Road vehicle fires exhibited a different pattern. In Wales, road vehicle fires constituted 32% of primary fires; in England these constituted 27%, but only made up 18% of the total in Scotland.

### Secondary fires (Table 5a)

- 1.22 England and Wales experienced a large fall in secondary fires (45% and 42% respectively) in 2012-13 compared to 2011-12 while the decline in Scotland was only 24% (see [Explanatory note 6](#) for definition of a secondary fire).

### Chimney fires (Tables 5a)

- 1.23 All the countries in Britain experienced a rise in chimney fires in 2012-13. Scotland saw an 11% increase in chimney fires whilst the increase in both England and Wales was 24%.

**Fatalities casualties and rates by country and fire and rescue service area (Table 5b and Table 22a)**

- 1.24 There were 350 fire-related fatalities in Britain in 2012-13, a reduction of 47 fatalities from 2011-12 of 397 fires that started accidentally. The fatality rate in fires in Britain in 2012-13 was 5.7 *per million population* (pmp). There are notable differences in fatality rates between Scotland and other countries:

- Scotland has had a consistently higher fatality rate over the years compared to the rest of Britain, currently at 8.7 pmp, down from 11.4 pmp in 2011-12;
- The rate in Wales was 5.5 pmp, down from 7.5 pmp in 2011-12;
- In England, the rate in 2012-13 was 5.3 pmp, down from 5.9 pmp in 2011-12.

**Non-fatal casualties and rates by country and rescue service area (Table 5b and Table 22b)**

- 1.25 There were 10,300 non-fatal casualties in Britain in 2012-13, 10% lower than the previous year. Within Britain, England experienced a 10% decline while the decreases in Wales and Scotland were 9% and 7% respectively.

- 1.26 The non-fatal casualty rate in Britain declined from 185 in 2011-12 to 167 in 2012-13. This is the lowest rate recorded over the past 12 years. By country, the non-fatal casualty rates were:

- England, 157 pmp in 2012-13, down from 177 pmp in 2011-12;
- Wales, 175 pmp in 2012-13, down from 193 pmp in 2011-12;
- Scotland, 247 pmp in 2012-13, down from 269 pmp in 2011-12;

Some of the highest non-fatality rates occurred in England occurred in the metropolitan fire and rescue authorities areas, with Greater Manchester (353 casualties per million population) and Merseyside 264 pmp. The highest rate recorded by an English non-metropolitan fire and rescue service area was in Lancashire (287 pmp). The highest casualty rate in Wales was in North Wales (309 pmp).

# Chapter 2 - Dwellings

## Introduction (Tables 2 and 6)

- 2.1 Dwelling fires account for 45% of all primary fires and 76% of all deaths in Great Britain in 2012-13 (see [Explanatory note 5](#) for further information on the definitions of primary and dwelling fires).  
Overall, the number of dwelling fires fell by 6% to 41,000 in 2012-13, continuing the downward trend since 2000-01.
- 2.2 Dwelling fires continue to account for the vast majority of fire related deaths. The number of fatalities in such fires was 266, down by 32 in 2012-13 compared to the previous year and down by a third compared to ten years earlier. Single occupancy house/ bungalow or flat accounts for 88% of all dwelling fire deaths and casualties.

## Accidental fires (Table 2)

- 2.3 Most dwelling fires in Britain in 2012-13 were accidental (89%). The 2012-13 figure is the lowest number of such fires recorded in more than a decade.

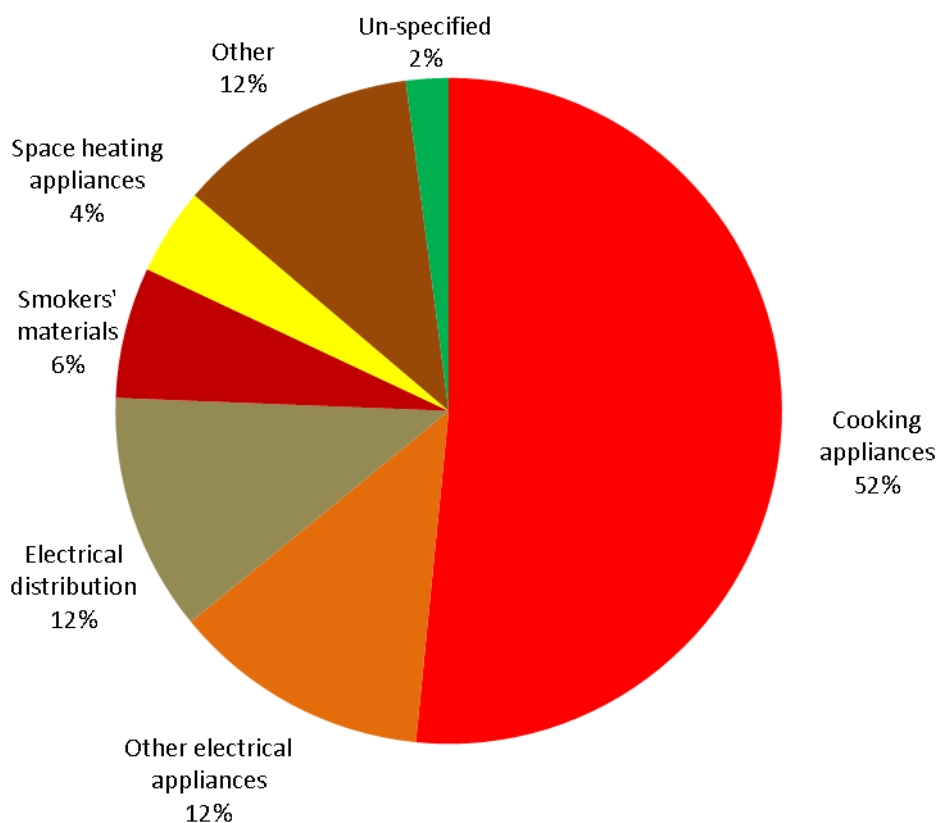
## Cause of fire (Table 2)

- 2.4 The main cause of accidental fires in dwellings remains the misuse of equipment or appliances, with 13,900 cases recorded in 2012-13, 6% fewer than in 2011-12. This is the lowest figure recorded since 2000-01. Other leading causes are:
- faulty appliances or leads. These have fallen by 20% in over a decade to 5,800;
  - careless handling of fire or hot substances. These declined by 28% since 2000-01;
  - Chip/fat pan fries. These have fallen by 77% in the last decade;
  - Incidences of placing articles too close to heat or fire. These have fallen by 17% since 2000-01.

## Source of ignition (Figure 2.1 and Table 3)

- 2.5 This section looks in more detail at the source of the flame, spark or heat that first ignited the fire. This is related to the cause of the fire, and for many sources of ignition there was only one major cause responsible for the fire. For example, for most fires in which the source of ignition was smokers' materials the cause was most likely to be careless handling of fire or hot substances.
- 2.6 Cooking appliances have been the main source of ignition (more than half) in accidental dwelling fires in 2012-13. Fires from this source show an almost continuous fall of around 41% from the peak of 32,000 in 2000-01.

**Figure 2.1: Sources of Ignition in accidental fires in dwellings, Great Britain, 2012/13p**



Note: Other includes mainly candles, central and water heating appliances and other sources  
P = provisional

## 2.7 Other key changes were:

- Fires where the source of ignition was smokers' materials (i.e. cigarettes, cigars or pipe tobacco but do not include lighting implements such as matches and lighters) declined by 42% from its peak in 2001-02;
- Candle fire totals are now around a half less than the 2001-02 figure;
- Fires from other electrical appliances have fallen by a quarter from 2001-02.

## Casualties from accidental fires (Tables 10 and 11)

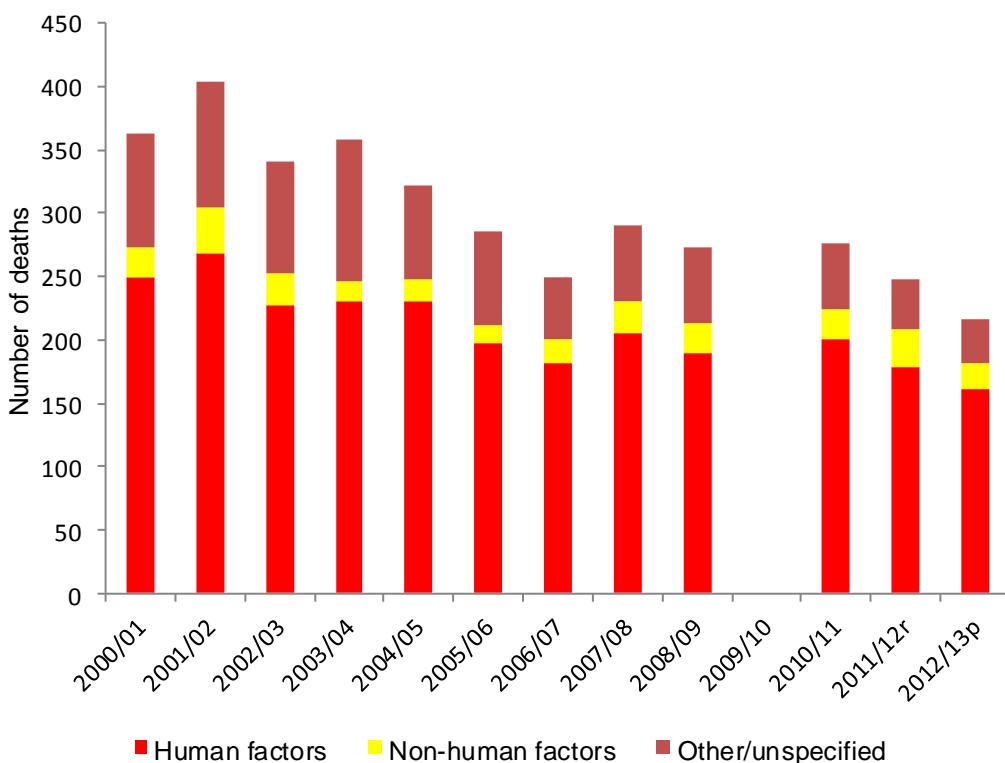
2.8 Of the 266 fatalities in dwellings in 2012-13, 217 (82%) were of accidental causes. The number of fatalities in accidental home fires has reduced by 46% from the peak of 404 in 2001-02.

### Fatalities by cause of fire (Figure 2.2 and Table 10)

2.9 The leading cause of fatal accidental dwelling fires remains the careless handling of fire or hot substances (mostly cigarettes). This cause claimed 86 deaths in Britain in 2012-13. Time series data shows a general downward trend in such fatalities and reached its lowest level in 2012-13.

2.10 Figure 2.2 shows that about three-quarters of accidental dwelling fire deaths were attributed to human factors.

**Figure 2.2: Fatalities from accidental dwelling fires by cause, Great Britain, 2000/01 – 2012/13p**



2009/10 figure was not shown due to incomplete record from one fire and rescue authority  
p= provisional; r = revised

2.11 Other key changes in the number of fatal casualties by cause of fire between 2001-02 and 2012-13 were:

- Fatalities from 'placing articles too close to heat' (second leading cause of accidental home fire deaths) fell by 8 from 44 to 36 in 2012-13;
- Faulty appliances and leads accounted for 17 fatalities, down from 28 in 2001-02;
- Fatalities due to the chip/fat pan fire down by 27 from 2001-02 to 11 in 2012-13.

### **Fatalities and rates by source of ignition of fire (Tables 2.1 and 11)**

2.12 Smokers' materials (i.e. cigarettes, cigars or pipe tobacco) were the most common source of ignition causing accidental dwelling fire fatalities, accounting for over a third of all accidental dwelling fire fatalities in 2012-13. For every 1,000 accidental dwelling fires caused by smokers' materials, 35 people were killed in 2012-13. Fatalities from this source have fallen by 43% from the peak of 144 in 2001-02.

2.13 Interestingly, while cooking appliances were responsible for more than half of accidental dwelling fires, it was not the main source of ignition that claimed most deaths. These fires caused 27 deaths in 2012-13. For every 1,000 fires started in cooking appliances, there was only one fatality. This could reflect the relatively minor nature of many cooking-related fires and the fact that many cooking fires occur when the victims are alert at the time of the fire.

2.14 Accidental dwelling fires sourced from space heating appliances resulted in 30 fatalities in 2012-13.

2.15 Fires started in other electrical appliances resulted in 14 fatalities in accidental dwelling fires in 2012-13.

2.16 Fires from cigarette lighters and matches accounted for 11 fatalities in accidental dwelling fires in 2012-13.



**Table 2.1: Fatal and non-fatal casualties in accidental dwelling<sup>1</sup> fires by source of ignition, Great Britain, 2012/13p**

	Total accidental Fires	Fatal casualties		Non-fatal casualties	
		Total	Per 1,000 fires	Total	Per 1,000 fires
<b>Total accidental</b>	<b>36,384</b>	<b>217</b>	<b>6</b>	<b>7,354</b>	<b>202</b>
Smokers' materials	2,318	82	35	671	<b>289</b>
Cigarette lighters	229	3	13	105	<b>459</b>
Matches	250	8	32	76	<b>304</b>
Cooking appliances	18,763	27	1	3,953	<b>211</b>
Space heating appliances	1,532	30	20	359	<b>234</b>
Central and water heating appliances	437	2	5	57	<b>130</b>
Blowlamps, welding and cutting equipment	191	0	0	27	<b>141</b>
Electrical distribution	4,200	8	2	450	<b>107</b>
Other electrical appliances	4,551	14	3	746	<b>164</b>
Candles	1,059	6	6	401	<b>379</b>
Other	2,104	14	7	347	<b>165</b>
Unspecified	750	23	31	162	<b>216</b>

<sup>1</sup> Includes caravans, houseboats, mobile homes and other non-permanent structures used solely as a permanent dwelling (see explanatory notes).

p=provisional

### Non-fatal casualties and rates by source of ignition of fire (Tables 2.1 and 11)

2.17 In 2012-13, there were 4,000 non-fatal casualties from accidental dwelling fires started by cooking appliances. This accounted for over half (54%) of non-fatal casualties in accidental dwelling fires and equates to 211 injuries per 1,000 fires. Although cooking appliance fires caused the largest *number* of injuries, they did not have the highest injury *rate* (per 1000 fires), again possibly reflecting the relatively minor nature of many cooking-related fires.

2.18 The injury rate was highest for fires started by cigarette lighters – 459 per 1,000 fires, a total of 105 injuries in 2012-13. The next highest was for fires caused by candles – 379 per 1,000 fires, a total of 401 injuries in 2012-13.

2.19 Accidental dwelling fires caused by other electrical appliances resulted in 746 non-fatal casualties in 2012-13. This is the lowest figure recorded in more than a decade.

2.20 Fires started by smokers' materials resulted in 671 injuries –maintaining the long term downward trend (there were 1,440 injuries occurred from this source in accidental dwelling fires in 2001-02).

### **Non-fatal casualties by cause of fire (Figure 2.3 and Table 10)**

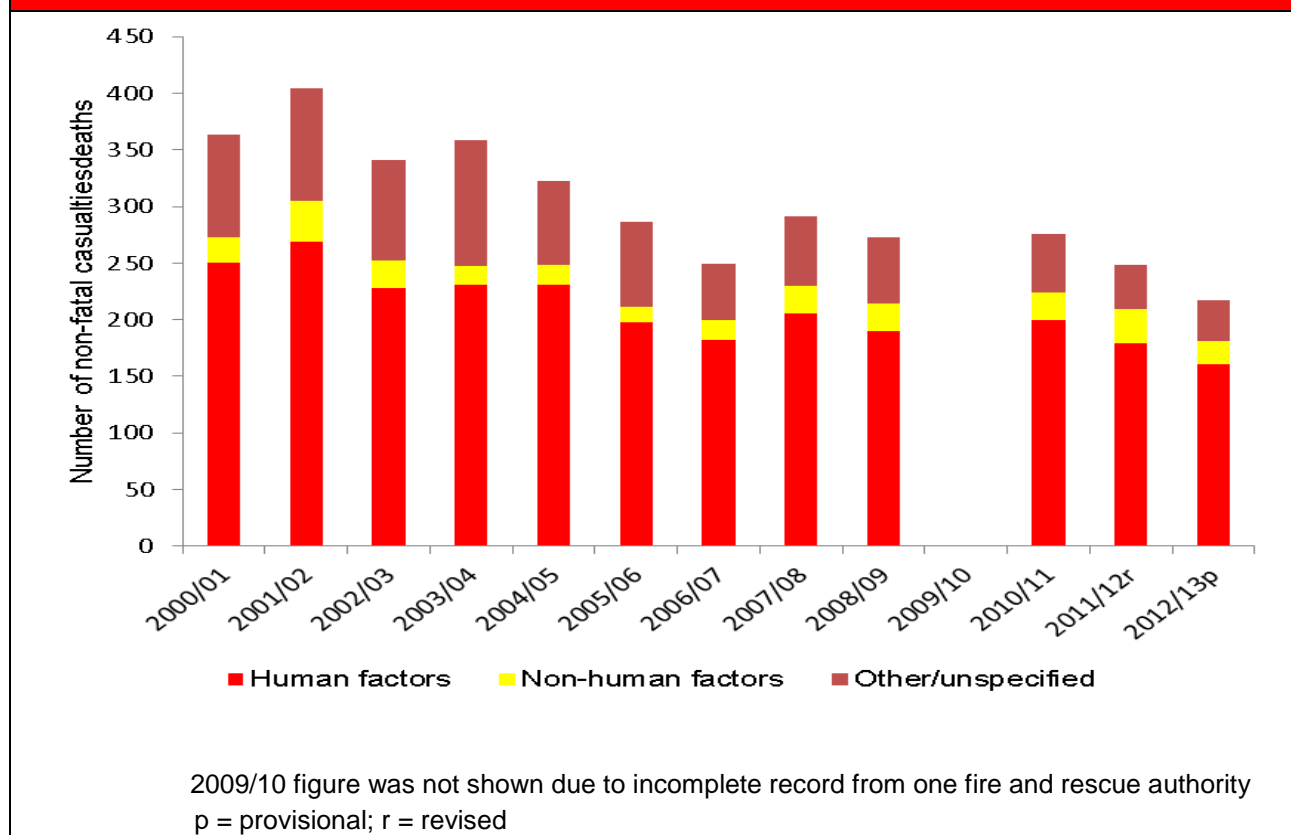
2.21 In 2012-13 the total number of non-fatal casualties in dwelling fires Britain was 8,300 – 7% fewer than in 2011-12. The vast majority of these casualties occurred in fires caused accidentally (88%). The total number of non-fatal casualties in accidental dwelling fires fell by 6% from 7,800 in 2011-12 to 7,400 in 2012-13. Time series data shows a gradual decline in the number of non-fatal casualties since 2001-02.

2.22 The pattern of non-fatal casualties by cause has changed over time. Until 2004/05 Chip/fat pan fires was the leading cause of non-fatal casualties in Britain. From 2005/06 misuse of equipment and appliances was the biggest cause of non-fatal casualties in accidental dwelling fires. Fires due to this cause resulted in 2,500 non-fatal casualties in 2012-13, 6% fewer than in 2011-12.

2.23 Other key changes between 2011-12 and 2012-13 in the number of non-fatal casualties by cause of fire were:

- Chip pan fire non-fatal casualties were down by 10% to 1,100 in 2012-13. Injuries from this cause are at the lowest level since 2000-01.
- Non-fatal casualties caused by careless handling of fire or hot substances declined by 12% to 1,000 in 2012-13.
- Non-fatal casualties from fires caused by faulty appliances and leads declined by 8% to 830 in 2012-13.

**Figure 2.3: Non-fatal casualties from accidental dwelling fires by cause, Great Britain, 2000/01 – 2012/13p**



### Casualties by room of origin of fire (Tables 2.2, 12a and 12b)

- 2.24 In 2012-13, 10% of accidental dwelling fires started in either the living room or dining room or lounge. Fires started in this location resulted in 108 deaths – the most fatalities (over 50%). This equates to a fatality rate of 31 per 1,000 fires. By contrast, kitchen fires (accounted for 62% of accidental dwelling fires) resulted in 33 deaths – with fatality rate of 1 per 1,000 fires
- 2.25 In 2012-13, 59% of all accidental dwelling fire fatalities occurred in the room where the fire started. However, this proportion varies widely depending on the room in which the fire started. For example, 57% of fatalities occurred in the living/dinning room which is the room of origin of fire, while nearly a third of fatalities occurred in the bedroom/bedsit where the fire started.
- 2.26 The majority (61%) of all non-fatal casualties occurred from kitchen fires (though in 89% kitchen victims were located in other rooms). Similar to fatalities, the non-fatal casualty rate in kitchen fires was relatively low at 198 per 1,000 fires compared to the highest rate of 330 per 1,000 fires starting in the bedroom/bedsit and 257 per 1,000 fires starting in the living room or dining room or lounge.

2.27 The pattern of non-fatal casualties is different from that of fatalities, with only 12% occurred in the room of origin in 2012-13. Once again, variations occurred according to the room in which the fire started. For example, 23% of non-fatal casualties occurred in the living room or in dining room which is the room of origin, compared to 55% occurred in the kitchen where the fire started.

**Table 2.2: Casualties in accidental dwelling<sup>1</sup> fires by use of room where fire started, Great Britain, 2012/13p**

	Total accidental Fires	Fatal casualties		Non-fatal casualties	
		Total	<i>Per 1,000 fires</i>	Total	<i>Per 1,000 fires</i>
<b>Room of origin of fire</b>	36,384	217	6	7,354	202
Bedroom or bedsitting room	3,140	52	17	1,037	330
Living room, dining room or lounge	3,604	110	31	926	257
Kitchen	22,437	33	1	4,452	198
Bathroom or lavatory	867	2	2	124	143
Corridor, hall or stairs	1,004	2	2	141	140
Laundry or airing cupboard	1,107	1	1	154	139
Store room or loft	1,295	1	1	165	127
Other	2,826	12	4	319	113
Unspecified	104	4	38	36	346

<sup>1</sup> Includes caravans, houseboats, mobile homes and other non-permanent structures used solely as a permanent dwelling (see explanatory notes).  
<sup>2</sup> Conservatory, garage, refuse stores, external fittings and external structures

## Smoke alarm analysis (Tables 2.3 to 2.9 and Figure 2.3)

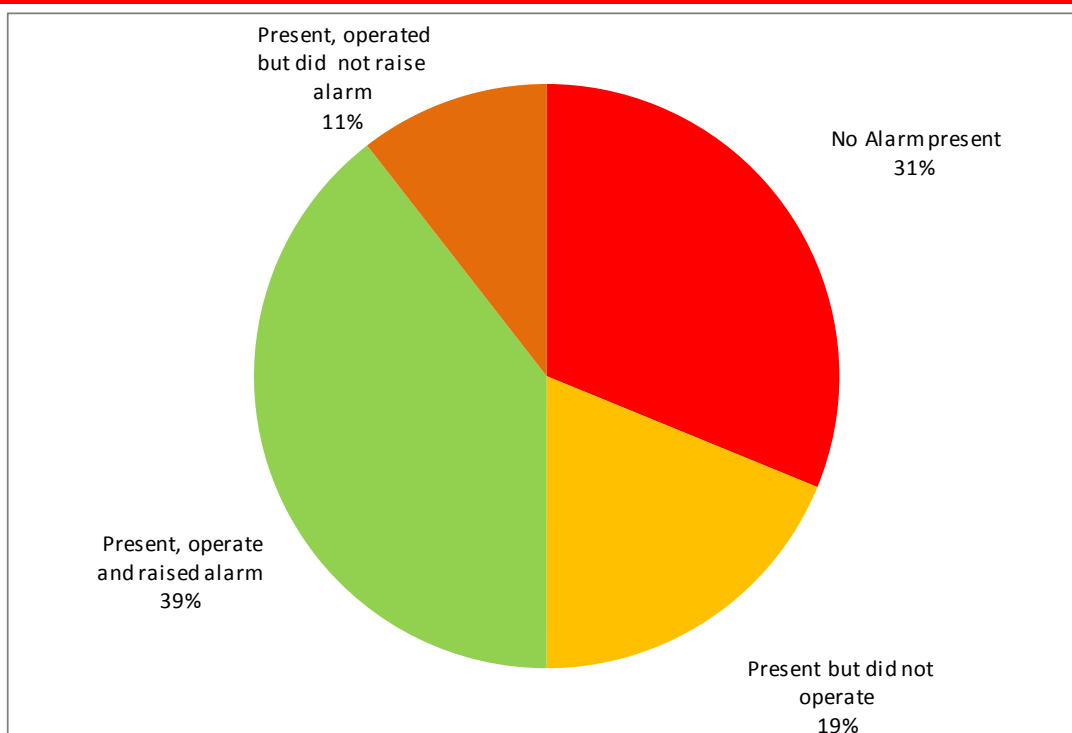
### Introduction

2.28 This section looks at the ownership and effectiveness of smoke alarms and the likely cause of failure on those occasions when alarms did not operate. The assessment and analysis presented here is based (as elsewhere in this report) on fires attended by the fire and rescue service. Any fires involving alarms where no emergency call was made to the fire and rescue service will not be recorded. Therefore, the figures reported may understate the effectiveness of smoke alarms. If a smoke alarm is working correctly it will provide the occupier with an early warning of fire or smoke, making it is less likely the fire and rescue service will be called. Findings from the 2004/05 Survey of English Housing (SEH) estimate that the fire and rescue service were called to just over a fifth of all domestic fires (see paragraph 1.2 and explanatory note 11 for further details).

### Smoke alarm ownership and operational status

2.29 Figure 2.4 shows the presence and operational status of smoke alarm in dwelling fires. No smoke alarm was present in nearly one third of reported dwelling fires in Britain in 2012-13. While smoke alarm was present in 69% of home fires but alarm did not operate in 19% of such fires. Within the category 'alarm operated but did not raise alarm', 59% was because the occupant was already aware of fire, 19% was because no one was within earshot of the alarm and 15% was because the occupants failed to respond (either due to poor health condition or being under the influence of drug or alcohol or falling asleep (see table 2.9).

**Figure 2.4: Fires in dwellings by smoke alarm presence and operation, Great Britain, 2012-13p**



p=provisional

2.30 Survey data (see table 2.3) show that the proportion of households with a smoke alarm increased rapidly from 8% in 1988 to 70% in 1994 in England, but has risen more slowly in later years up to 88% has at least one working smoke alarm in 2011.

<b>Table 2.3: Smoke alarm ownership, percentage of households, 1988-2011</b>			
England and Wales (unless otherwise stated)			
Year	Smoke alarm ownership (% of households)		Source <sup>1</sup>
	1988	8%	BCS
	1989	25%	BJM
	1990	-	-
	1991	36%	EHCS <sup>2</sup>
	1992	45/50%	BCS/ONS
	1993	66%	ONS
	1994	70%	ONS
	1995	71%	ONS
	1996	67/72%	EHCS <sup>2</sup> /ONS
	1997	75%	ONS
	1998	82%	NCFSC
	1999	77/81%	BCS/NCFSC
	2000	83%	NCFSC
	2001	81%	NCFSC
	2002	-	-
	2003	78%	EHCS <sup>2</sup>
	Working smoke alarm ownership (% of households)		Source <sup>1</sup>
	2001	76%	BCS <sup>3</sup>
2002/03		76%	BCS <sup>3</sup>
2003/04		-	-
2004/05		80%	SEH <sup>2,3</sup>
	2006	84%	EHCS <sup>2</sup>
	2007	85%	EHCS <sup>2</sup>
	2008	86%	EHS <sup>4</sup>
	2011	88%	EHS <sup>4</sup>
<p><sup>1</sup> Sources: British Crime Survey (BCS); BJM survey commissioned by the Home Office (BJM); English House Condition Survey (EHCS); ONS Omnibus Survey (ONS); National Community Fire Safety Centre 'Fire Safety Attitude and Behaviour Monitor' (NCFSC); Survey of English Housing (SEH);</p> <p>In April 2008 the English House Condition Survey was integrated with the Survey of English Housing to form English Housing Survey, <sup>2</sup> England only</p> <p><sup>3</sup> Refers specifically to ownership of a working smoke alarm. <sup>4</sup> English Housing survey, - Data not available</p>			

## Smoke alarm presence, operation and casualties (Tables 2.4 to 2.6)

2.31 About one third (89) of home fire deaths resulted from fires where there was no smoke alarm at all. These fires accounted for 2,100 non-fatal casualties. Within the dwelling fires where an alarm was present:

- an alarm failed to operate resulted in 47 deaths and 1,400 non-fatal casualties;
- an alarm operated but did not raise the alarm resulted in 62 deaths and 1,100 casualties;
- an alarm operated and raised the alarm resulted in 68 deaths and 3,800 non-fatal casualties. Among the victims, 10 were under the influence of drug, 4 sustained intentional injury to commit suicide and 13 had health conditions that limited their mobility.

**Table 2.4 Fires and casualties from fires in dwellings<sup>1</sup> by presence and operation of smoke alarms, Great Britain, 2006/07-2012/13p**

	Presence and operation of smoke alarm					Total
	Present, operated & raised the alarm	Present, operated, but did not raise the alarm	Present, but did not operate	Absent	Unspecified	
<b>Fires</b>						
2006/07	19,322	3,206	6,689	24,568	..	53,785
2007/08	18,906	3,220	6,832	21,444	5	50,407
2008/09	17,715	3,558	10,176	15,998	19	47,466
2009/10	-	-	-	-	..	47,152
2010/11	16,382	4,433	7,780	16,407	..	45,002
2011/12r	16,226	4,551	7,881	14,936	..	43,594
2012/13p	16,199	4,313	7,715	12,801	..	41,028
<b>Fatal casualties</b>						
2006/07	61	36	68	164	..	329
2007/08	67	43	102	159	..	371
2008/09	70	55	103	112	..	340
2009/10	-	-	-	-	..	405
2010/11	83	43	76	116	..	318
2011/12r	73	52	62	111	..	298
2012/13p	68	62	47	89	..	266
<b>Non-fatal casualties</b>						
2006/07	4,094	735	1,639	4,535	..	11,003
2007/08	4,177	799	1,882	3,989	..	10,847
2008/09	3,994	903	2,074	2,845	6	9,822
2009/10	-	-	-	-	-	10,316
2010/11	3,787	1,147	1,561	2,599	..	9,094
2011/12r	3,901	1,198	1,433	2,468	..	9,000
2012/13p	3,780	1,060	1,423	2,076	..	8,339

<sup>1</sup> Includes caravans, houseboats, mobile homes and other non-structured buildings used solely as a permanent dwelling

(see explanatory notes).

- Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10

### Type of alarm (Table 2.5)

2.32 In 2012-13, smoke alarms were present in the fire area in 28,200 dwelling fires. Of these fires, 39% had battery-operated alarms, while 59% had mains-powered.

<b>Table 2.5: Dwelling<sup>1</sup> fires where a smoke alarm was present by type of alarm, Great Britain, 2007/07-2012/13p</b>						
Year	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
<b>Alarm type (number)</b>						
Battery-powered	12,072	11,725	-	12,302	11,883	11079
Mains-powered	16,503	16,165	-	15,961	16,395	16785
Other/Unspecified	287	142	-	332	382	366
Total	28,862	28,033	-	28,595	28,660	28,230
<b>Alarm type (%)</b>						
Battery-powered	42	42	-	43	41	39
Mains-powered	57	58	-	56	57	59
Other/Unspecified	1	1	-	1	1	1
Total	100	100	-	100	100	100%
<sup>1</sup> Includes caravans, houseboats, mobile homes and other non-structure buildings used solely as a permanent dwelling (see explanatory notes) p = provisional; r = revised						

### Discovery of fires (Table 2.6)

2.33 In 2012-13, a smoke alarm raised the alarm in 39% of reported dwelling fires. This is 2% up compared to 2011-12. Dwelling fires in which smoke alarms raise the alarm continue to:

- be discovered more rapidly (less than 5 minutes) after ignition;
- be associated with lower fatal casualty rates.

2.34 Generally, the shorter the interval between ignition and discovery of a fire, the lower the death rate. Working smoke alarms tend to shorten the discovery time. In 2012-13, three-fifths (58%) of dwelling fires where a smoke alarm raised the alarm were discovered in under 5 minutes. In contrast, where a smoke alarm was either absent or did not raise the alarm, just over half (52%) of all dwelling fires were discovered in under 5 minutes. Consequently, a wide variation in dwelling fire fatality rates have been observed between the two situations: where at least one smoke alarm raised the alarm and where smoke alarms are either absent or did not raise the alarm (4 per 1,000 detected fires compared to 8 per 1,000 for undetected fires in 2012-13).



**Table 2.6: Fires and casualties from fires in dwellings<sup>1</sup> by smoke alarm presence and operation, by percentage discovered in under 5 minutes, Great Britain, 2007/08-2012/13p**

Year	Fires	Fatal casualties	Rate <sup>2</sup>	Non-fatal casualties	Rate	% of fires discovered < 5 minutes
<b>Fires where an alarm was present, operated and raised the alarm</b>						
2007/08	18,906	67	4	4,047	214	62
2008/09	17,715	67	4	3,836	217	61
2009/10	-	-	-	-	-	-
2010/11	16,382	83	5	3,787	231	58
2011/12r	16,226	73	4	3,901	240	58
2012/13p	16,199	68	4	3,780	233	58
<b>Fires where an alarm was absent or an alarm was present but failed to raise the alarm</b>						
2007/08	31,502	286	9	6,443	205	52
2008/09	29,752	261	9	5,621	189	51
2009/10	-	-	-	-	-	-
2010/11	28,620	235	8	5,307	185	50
2011/12r	27,368	225	8	5,099	186	51
2012/13p	24,829	198	8	4,559	184	52
<sup>1</sup> Includes caravans, houseboats, mobile homes and other non-structured buildings used solely as a permanent dwelling (see explanatory notes). <sup>2</sup> Rate per thousand fires; p=provisional, r=revised - Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10						

### Smoke alarm failures (Tables 2.7 to 2.9)

- 2.35 In dwelling fires where a smoke alarm was present, 27% of alarms in 2012-13 failed to operate. However, a wide difference in performance between battery-powered alarms and mains-powered alarms was observed: 39% of all battery-powered smoke alarms failed compared to just 19% of mains-powered alarms in 2012-13.
- 2.36 The main reason for smoke alarms failure in battery-powered alarms in 2012-13 was that the fire products (typically smoke) did not reach the alarms (44%). Missing or flat batteries accounted for 27% of all failure in battery-powered smoke alarm. For mains-powered alarms, fire products did not reach the alarms was also the main reason for alarm failure (51% of cases). System turned off or the detector removed was accounted for 10% of alarm failure.
- 2.37 The smoke alarm operated but did not raise the alarm in 4,300 fires in 2012-13. The main reasons were either the occupants raised the alarm before the smoke alarm operated (59%) or there was no person within earshot of the alarm (19%) or occupants failed to respond (15%).

**Table 2.7: Smoke alarm failures in dwelling<sup>1</sup> fires by type of alarm, Great Britain, 2007/08 - 2012/13p**

Year	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
Alarm present <sup>2</sup>	28,862	28,033	-	28,595	28,658	28,227
Alarm failed to operate	6,735	6,760	-	7,659	7,881	7,715
<i>Failure rate (%)</i>	23	24	-	27	28	27
<b>Battery-powered</b>						
Alarm present	12,072	11,725	-	12,302	11,883	11,079
Alarm failed to operate	4,321	4,198	-	4,596	4,600	4,335
<i>Failure rate (%)</i>	36	36	-	37	39	39
<b>Mains-powered<sup>3</sup></b>						
Alarm present	16,503	16,165	-	15,961	16,395	16,785
Alarm failed to activate	2,327	2,504	-	3,063	3,133	3,262
<i>Failure rate (%)</i>	14	15	-	19	19	19
<p><sup>1</sup> Includes caravans, houseboats, mobile homes and other non-permanent structures used solely as a permanent dwelling (see explanatory notes).</p> <p><sup>2</sup> Alarm present total does not sum to individual categories as a small number of alarms with other or an unspecified power source have been included.</p> <p><sup>3</sup> Mains-powered alarms include those powered by mains only or by both mains and battery</p>						

**Table 2.8: Fires in dwellings<sup>1</sup> with a smoke alarm where alarm did not operate by type of alarm and reason for failure, Great Britain, 2007/08 - 2012/13p**

Year	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
<b>Type of alarm and reason for failure</b>						
<b>Powered - Battery</b>						
Missing battery	37%	32%	-	21%	18%	17%
Battery failure/flat	9%	10%	-	10%	10%	10%
Other act preventing alarm from operating incl. turned off	5%	4%	-	2%	2%	2%
Fire products did not reach the detector(s)	36%	39%	-	44%	43%	44%
Poor siting of detector(s)	4%	2%	-	10%	11%	10%
Faulty system / incorrectly installed	4%	4%	-	4%	3%	4%
Other including not known e.g. where system too badly damaged	5%	8%	-	10%	12%	12%
<b>Total</b>	100%	100%	-	100%	100%	100%
<b>Powered - Mains</b>						
Missing battery	5%	3%	-	2%	1%	1%
Battery failure/flat	0%	1%	-	1%	0%	0%
Other act preventing alarm from operating incl. turned off	24%	22%	-	14%	11%	10%
Fire products did not reach the detector(s)	50%	48%	-	48%	48%	51%
Poor siting of detector(s)	1%	1%	-	12%	12%	10%
Faulty system / incorrectly installed	9%	10%	-	9%	8%	8%
Other including not known e.g. where system too badly damaged	11%	15%	-	14%	20%	19%
<b>Total</b>	100%	100%	-	100%	100%	100%

<sup>1</sup> Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling (see Definitions section).

-Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10

**Table 2.9: Fires in dwellings<sup>1</sup> with a smoke alarm where alarm operated but did not raise the alarm by reason, Great Britain, 2007/08 – 2012/13p**

Year	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
Reason						
Person raised the alarm before system operated	59%	55%	-	57%	57%	59%
No person in earshot	21%	20%	-	20%	20%	19%
Poor sitting of detectors meant person raised alarm	2%	1%	-	0%	0%	0%
Occupants failed to respond	9%	11%	-	15%	15%	15%
Faulty system incl. incorrectly installed	1%	1%	-	0%	0%	0%
Other including not known e.g. where System too badly damaged	9%	11%	-	7%	7%	7%
Total	100%	100%	-	100%	100%	100%

<sup>1</sup> Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling (see definitions section).

-Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10

### Deliberate fires (Tables 2. 24 and 2.10)

2.38 There were 23,700 deliberate fires or suspected to be deliberately started in Britain in 2012-13. Of the total deliberate fires, the majority (45%) of deliberate fires involved road vehicles. Only 20% were in dwellings. The number of deliberate dwelling fires shows a gradual decline since 2003-04, and was 65% in 2012-13 compared to 2003-04.

2.39 In total there were 93 fatalities in deliberate fires in 2012-13, one fewer than in 2011-12. The majority (49) of these deaths occurred in dwelling fires, accounting for over half of the total fatalities in deliberate fires.

2.40 There were a total of 1,400 non-fatal casualties as a result of deliberate fires in 2012-13, down from 1,700 in 2011-12. Half of the injuries were either hospital slight or hospital severe injuries. About 70% of non-fatal casualties occurred in dwelling fires.

**Table 2.10 Deliberate fires and casualties by location, Great Britain, 2011/12 and 2012/13p**

Deliberate fires	2011/12		2012/13	
	Fatal	Non-fatal casualties	Fatal	Non-fatal casualties
Dwelling	50	1,207	49	985
Other building	7	268	7	240
Road vehicle	13	78	21	59
Other	22	165	16	120
Total	92	1,718	93	1,404

# Chapter 3 - Other Buildings

## **Introduction** (Tables 1b and 6)

3.1 In 2012-13 there were 22,500 fires recorded in buildings that were not dwellings. This was 18% and 41% fewer than 2011-12 and 2002-03 respectively. This is the lowest figure recorded in more than a decade. The majority of fires occurred in:

- private garages, sheds etc. (19%) – 4,300 fires;
- retail distribution (14%) – 3,100 fires;
- industrial premises (11%) – 2,600 fires;
- restaurants, cafes, pub/wine bars, and take away (10%) – 2,300 fires;
- communal living (9%) – 2,000 fires.

3.2 In 2012-13, 17 people died in buildings fires other than dwellings, twelve fewer than a year earlier. Also, 1,031 injuries were sustained in other building fires in 2012-13, 17% lower compared with 2011-12. These figures represent around 5% of all fire fatalities and 10% of non-fatal casualties in Great Britain.

## **Accidental fires** (Table 2)

### **Trends**

3.3 About three quarters of all fires in other buildings were started accidentally compared to 89% of those in fires in dwellings. In 2012-13, a total of 14,600 accidental fires were recorded in other buildings, 13% and 32% fewer than in 2011-12 and 2002-03 respectively.

### **Cause of fire**

3.4 The main cause of accidental fires in other buildings remains faulty appliances and leads. In 2012-13, fires from this cause resulted in 3,900 fires, representing 26% of all such fires and down by 3% from 2011-12. Another key cause of accidental fires in other buildings was the misuse of equipment or appliances which accounted for 2,200 fires and was down by 13% in 2012-13 from a year earlier.

### Source of ignition (Table 3)

3.5 The main source of ignition in fires in other buildings is electrical (appliances and their leads). These accounted for one fifth of accidental fires in other buildings and slightly up 2% in 2012-13 compared to 2011-12. Other key sources are cooking appliances and other electrical appliances. Fires whose source was from a cooking appliance fell by 9% in 2012-13. Other key changes relating to source of ignition from 2011-12 were:

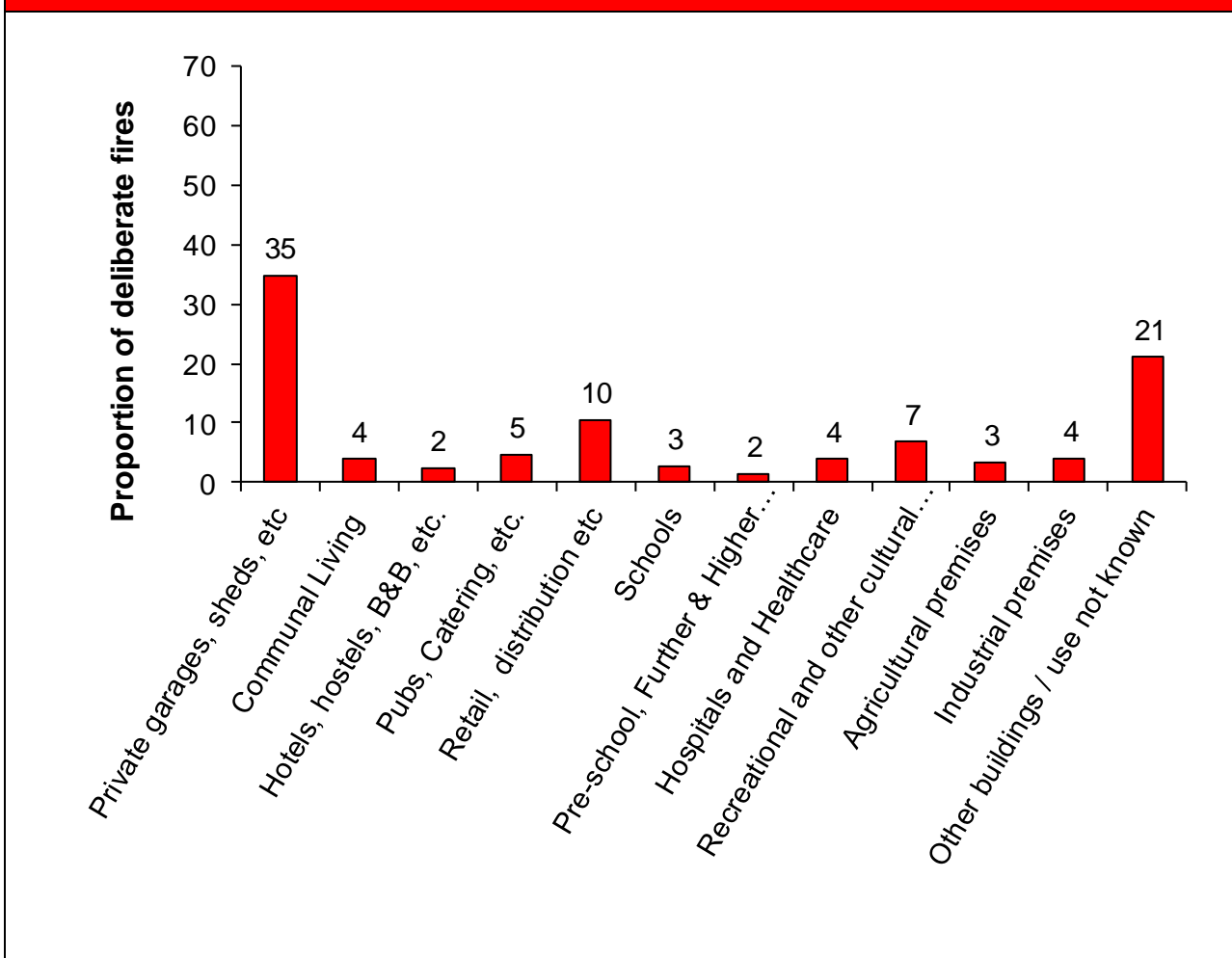
- Smokers' materials – declined by 27% to 840,
- Other electrical appliances – declined by 8% to 2,800.

### Deliberate fires (Tables 2.14 and 24, Figure 3.1)

#### Trends

3.6 5,300 (26%) of other building fires were due to deliberate ignition, down by 28% from 2011-12. Over the last decade, the number of deliberate fires in other buildings has declined by more than two thirds. (See paragraph 1.10 and table 1.2).

Figure 3.1: Other building fires: proportion of deliberate fires by location, Great Britain, 2012/13p



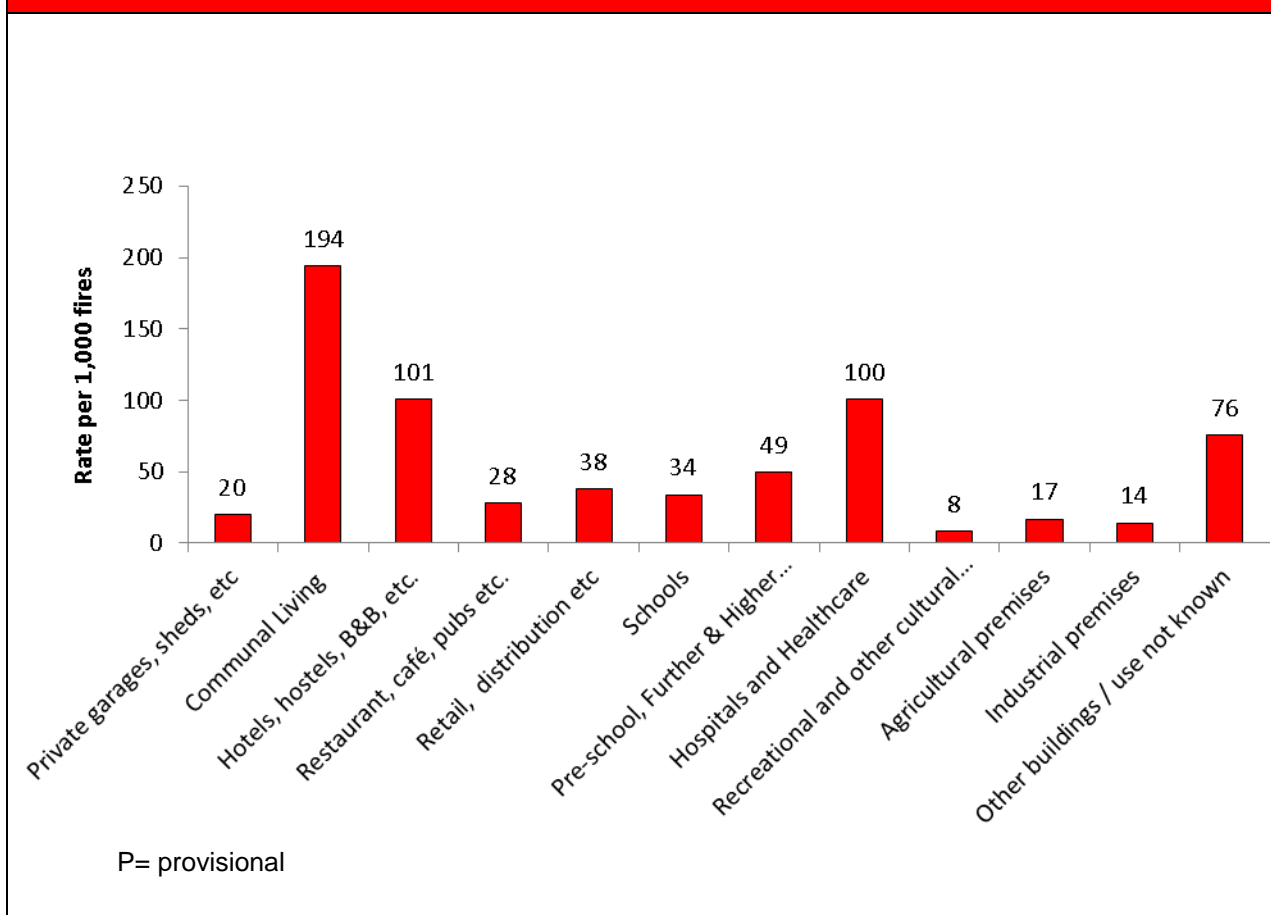
### Location (Figure 3.1)

3.7 A comparison of the number of deliberate fires in other building locations shows that certain buildings are more prone to deliberate ignition than others. The main locations in 2012-13 were private garages and sheds (35%), buildings whose use was not known or not categorised (21%) and retail and distribution (10%).

### Non-fatal casualties and Location (Figure 3.2)

3.8 In 2012-13, the highest non-fatal casualty rates in deliberate fires in other buildings occurred in communal areas (194 casualties per 1,000 fires). High non-fatal casualty rates were also recorded in hotel, hostels and B&B - (101 non-fatal casualties per 1,000 fires) and hospital and health cares (100 non-fatal casualties per 1,000 fires). The rate in schools, and restaurant, cafe and pubs and catering areas are 34 and 28 per 1,000 fires respectively.

**Figure 3.2: Deliberate fires in other buildings: Non-fatal casualty rates by location, Great Britain, 2012/13p**



## Automatic smoke alarm analyses in other buildings (Tables 3.1 to 3.3, Figure 3.3)

### Introduction

3.9 This section looks at the effectiveness of smoke alarms and the likely causes of failure on those occasions when alarms did not operate. The assessment and analysis presented here is based (as elsewhere in this report) on fires attended by the fire and rescue service. Any fires involving alarms where no emergency call was made will not be recorded, meaning that effectiveness of automatic fire alarms may be understated. See paragraph 2.26 for further details in relation to domestic smoke alarms.

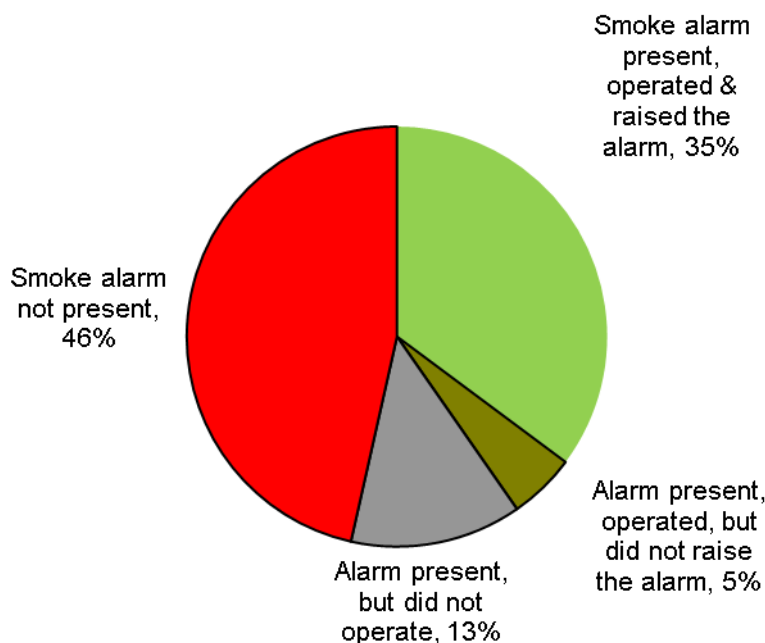
### Automatic smoke alarm presence and operation

3.10 Automatic smoke alarms were not present in 46% (9,200) of other building fires in 2012-13, down by more than one fourth compared with 2011-12. These fires resulted in 11 fatalities (65% of total other building fire deaths) and a further 387 non-fatal casualties. For the remaining 54% of other building fires where an automatic smoke alarm was present:

- The automatic fire alarm operated and raised the alarm in 35% (7,000 fires);
- The fire alarm operated but did not raise the alarm in 5% (1,000 fires);
- The alarm failed to operate altogether in 13% (2,600 fires).

This follows a broadly similar pattern to that for dwelling fires (39%, 11% and 19% respectively). Again, 46% of fires occurred in other buildings without having any smoke alarm compared to 31% of dwelling fires occurred where smoke alarm was absent.

**Figure 3.3: Fires in other buildings by automatic smoke alarm presence and operation, Great Britain, 2012/13p**





- 3.11 The number of fires in other buildings where the automatic smoke alarm failed to operate was 2,600 in 2012-13, 11% less than in 2011-12. But, there were no deaths from such fires in 2012-13. The main reason why automatic fire alarms failed to operate was due to fire products not reaching the alarms – 51% of such fires. Other reasons include other act which prevented alarm from operating (including alarm turned off) (20%) and poor positioning of the alarm (11%).
- 3.12 The number of fires in other buildings where the automatic fire alarm operated, but did not raise the alarm has declined slightly to 1,020 in 2012-13 from 1,200 in 2011-12. The main reasons in 2012-13 for this condition were that a person raised the alarm before the alarm operated (73%) or there was no-one within earshot of the alarm (16%).

**Table 3.1: Fires and casualties from fires in other buildings by presence and operation of smoke alarm<sup>1</sup>, Great Britain, 2006/07- 2012/13p**

	Presence and operation of smoke alarm				Total
	Present, operated & raised the alarm	Present, operated, but did not raise the alarm	Present, but did not operate	Absent & Unspecified	
<b>Fires</b>					
2006/07	8,915	941	2,335	19,558	31,749
2007/08	7,914	955	2,457	17,861	29,186
2008/09	7,631	1,002	4,530	12,910	26,074
2009/10	-	-	-	-	-
2010/11	8,164	1,131	3,004	12,741	25,040
2011/12r	7,553	1,203	2,942	12,515	24,213
2012/13p	6,997	1,023	2,623	9,244	19,887
<b>Fatal casualties</b>					
2006/07	6	2	1	21	30
2007/08	12	1	1	21	35
2008/09	10	0	2	5	17
2009/10	-	-	-	-	26
2010/11	5	1	2	11	19
2011/12r	1	1	2	25	29
2012/13p	5	1	0	11	17
<b>Non-fatal casualties</b>					
2006/07	485	56	138	723	1,402
2007/08	442	56	102	629	1,229
2008/09	412	55	204	515	1,186
2009/10	-	-	-	-	-
2010/11	531	77	132	502	1,242
2011/12r	498	66	169	504	1,237
2012/13p	439	83	122	387	1,031

<sup>1</sup> includes smoke a very small number of other automatic detectors such as heat detector

- Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10.

P=provisional, r= revised

**Table 3.2 Fires in other buildings with fire alarm where alarm did not operate by reason, Great Britain, 2006/07- 2012/13p**

Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
<b>Reason for not operating</b>							
Missing battery	2%	1%	1%	-	0%	1%	1%
Battery failure/flat	0%	1%	0%	-	0%	0%	0%
Other act preventing alarm from operating incl. turned off	8%	8%	6%	-	23%	20%	20%
Fire products did not reach detector(s)	77%	75%	73%	-	44%	47%	50%
Poor siting of detector(s)	0%	1%	1%	-	14%	13%	11%
Faulty system incl. incorrectly installed	4%	4%	3%	-	3%	3%	4%
Other <sup>1</sup>	9%	10%	15%	-	14%	14%	13%
Unspecified	0%	0%	1%	-	1%	1%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>-</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<sup>1</sup> Other includes 'not known' and 'system damaged by fire'  
 - Data not available due to incomplete records from one Fire and Rescue Authority in 2009/10  
 p=provisional; r=revised

**Table 3.3: Fires in other buildings with an automatic fire detector where detector operated but did not raise the alarm by reason, Great Britain, 2006/07- 2012/13p**

Year	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12r	2012/13p
<b>Reason</b>							
Person raised the alarm before system operated	69%	66%	68%	-	71%	69%	73%
No person within earshot of the alarm	14%	17%	14%	-	17%	19%	16%
Poor positioning of alarm	1%	1%	0%	-	0%	1%	2%
Occupants failed to respond	2%	1%	2%	-	2%	1%	1%
Faulty system incl. incorrectly installed	3%	1%	1%	-	0%	0%	0%
Other including not known e.g. where system too badly damaged	11%	13%	14%	-	10%	10%	8%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>-</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

- Data not available due to incomplete record from one fire and rescue authority in 2009/10 ; p=provisional, r=revised

# Chapter 4 - Road Vehicle Fires

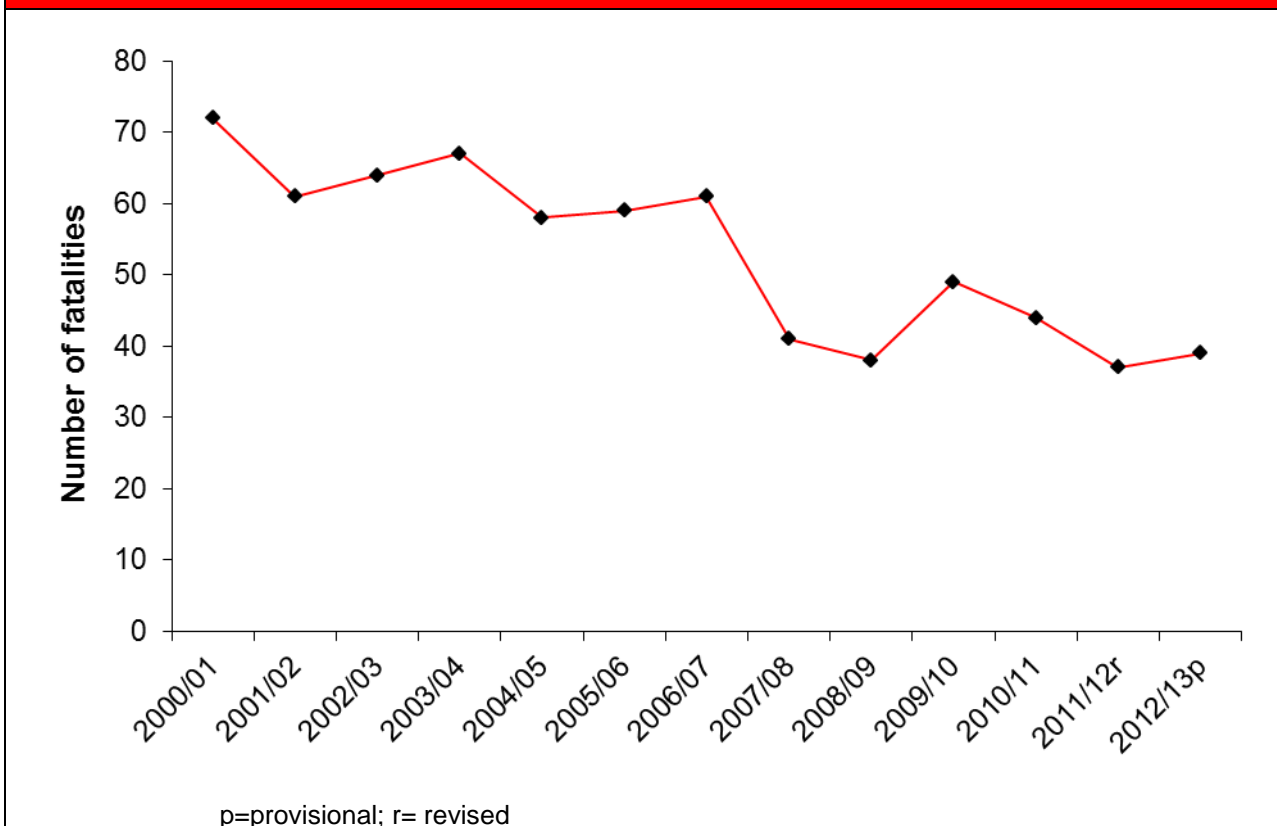
## Introduction (Table 1a, 16)

- 4.1 In 2012-13, Fire and rescue authorities in Britain responded to 23,900 road vehicle fires, down by 15% from 28,000 in 2011-12. The 2012-13 figure represented the lowest in more than a decade and declined by more than three quarters from the peak in 2001/02.
- 4.2 Breakdown by cause shows a downward trend for deliberate vehicle fires since 2002/03. Accidental fires in 2012-13 declined by 6% and 32% in 2011-12 and 2002-03 respectively.
- 4.3 Breakdown by types shows that the majority (66%) of fires occurred in cars, 9% in vans, 5% in lorries and 2% in coaches, buses or minibuses. The number of car fires was 80% fewer than ten years earlier.

## Casualties (Table 6)

- 4.4 The number of deaths in road vehicle fires in 2012-13 was 39, 2 up from 37 in 2011-12. This equates to 1.6 fatalities per 1,000 fires and contrasts with a fatality rate for dwellings of 6.5 fatalities per 1,000 fires. Time series data shows that road vehicle fire fatalities have been declined by 39% in the last 10 years.

Figure 4.1: Number of fatalities in fires in road vehicle, Great Britain, 2000/01 – 2012/13p



- 4.5 The number of non-fatal casualties in road vehicle fires decreased slightly to 560 in 2012-13 from 610 in 2011-12. This is much lower than the level of fires recorded in 2000-01 (700 non-fatal cases). These latest figures equate to 23 non-fatal casualties per 1,000 fires, compared with 203 in dwellings and 52 in other buildings.

# Chapter 5 – Outdoor Fires

## Introduction (Tables 1c, 6 and 5.1)

- 5.1 In 2012-13, Primary and secondary<sup>3</sup> outdoor fires in Great Britain totalled 119,700, 38% lower than in 2011-12. Of which 57,500 (48%) were refuse fires (including bonfires, refuse containers), 22,100 (18%) were grassland and heathland fires, 24,300 (20%) were road vehicle fires and 15,800 (13%) were other outdoor fires (including derelict buildings). Further details on road vehicle fires are given in Chapter 4. The remainder of this chapter mainly covers other types of outdoor fires.
- 5.2 Relatively fewer casualties occur in outdoor fires, other than in road vehicle fires. In 2012-13 there were 28 fire related fatalities, and 350 non-fatal casualties in outdoor fires (excluding road vehicle fires), amounting to around five deaths and 62 non-fatal casualties per 1,000 outdoor fires.

**Table 5.1: Primary and secondary outdoor fires<sup>1</sup> by location, Great Britain, 2000/01 - 2012/13p**

Year	Total	Road vehicles	Grassland, etc <sup>2</sup>	Refuse <sup>3</sup>	Other outdoor fires
2000/01	323.9	90.9	50.8	139.2	43.1
2001/02	404.3	99.7	69.6	178.2	56.8
2002/03	395.0	93.0	81.4	166.0	54.6
2003/04	460.3	86.1	129.3	188.9	55.9
2004/05	311.1	67.9	54.8	148	40.5
2005/06	309.8	61.5	67.3	142.9	38
2006/07	318.2	55.6	84.8	140.8	37.1
2007/08	275.2	47.6	56.2	139.2	32.3
2008/09	202	42.4	34.9	101	23.8
2009/10	-	-	-	-	-
2010/11	203.9	33.7	61.6	87.4	21.3
2011/12r	193.6	28.9	57.3	85.7	21.7
2012/13p	119.7	24.3	22.1	57.5	15.8

<sup>1</sup> Figures in thousand and figures are rounded and the components do not necessarily sum to the independently rounded totals.

<sup>2</sup> Includes woodland, heathland, domestic garden, nurseries, vegetation etc. and intentional straw and stubble burning

<sup>3</sup> includes large and small refuse/rubbish container and landfill sites  
- data not available due to incomplete records from one Fire and Rescue Authority in 2009/10

The total outdoor fires is less than Table 1c total because it excludes derelict buildings

P=provisional, r= revised

<sup>3</sup> Whereas other sections of this publication focus on primary fires (those involving property and/or any casualties and/or five or more appliances and for which more detailed information is collected), this outdoor fires chapter considers all outdoor fires regardless of whether they qualified as being 'primary fires'. Most outdoor fires are 'secondary' fires since they involved no property, no casualties and were not attended by five or more appliances.

- 5.3 The number of grassland and heathland fires is dependent on persisting weather conditions. In 2012-13, there were 22,100 such fires recorded. This was 35,000 fewer than in 2011-12 due to 2012 having above average rainfall, and 107,000 less than the peak in 2003-04.
- 5.4 Refuse fires decreased in 2012-13 to 57,500 from 85,700 in 2011-12 This was the lowest level over the decade.
- 5.5 There were 24,300 road vehicle fires in 2012-13, a decrease of 15% from 2011-12 which itself had been the lowest level for more than a decade.

## When fires occur (Table 5.2)

- 5.6 Outdoor fires exhibit a strong seasonal pattern mainly due to the effect of the weather on grassland fires. In 2012, rainfall was below average for the first few months, then well above average for most months in the rest of the year. The daily rates of grassland fires during 2012-13 reflect this. Fires in dwellings show less distinct seasonal variation, with slightly higher numbers of fires per day occurring in the winter months. Seasonal variation is more prominent in chimney fires, with higher numbers of fires per day in winter months.

**Table 5.2: Daily rates of fires by month and location, Great Britain, 2012/13p**

	<i>Total fires</i>	<i>Buildings</i>		<i>Outdoor Fires</i>			<i>Chimney fires</i>	
		<i>Dwellings</i>	<i>Other</i>	<i>Road vehicles</i>	<i>Grassland etc<sup>1</sup></i>	<i>Refuse</i>		<i>Other Outdoor</i>
<b>2012/13</b>	526	114	60	67	65	156	38	26
Apr	608	116	63	61	115	178	41	33
May	629	113	71	71	116	189	54	14
Jun	477	107	62	67	51	144	37	8
Jul	499	107	60	75	56	156	41	4
Aug	539	105	60	75	76	174	46	3
Sep	590	110	63	74	102	183	49	10
Oct	502	115	59	65	34	169	40	19
Nov	589	119	60	70	35	226	53	25
Dec	400	122	54	62	13	92	20	37
Jan	395	115	53	62	14	85	21	45
Feb	518	119	58	63	55	142	27	55
Mar	569	119	58	58	112	135	30	58

<sup>1</sup> Includes Woodland, heathland and intentional straw and stubble burning. P=provisional

# Definitions

1. The following list shows definitions which have been applicable since 1994:

<p><b>Primary fires</b></p> <p><i>- no specific definition prior to 1994</i></p>	<p>These are reportable fires (at the locations listed below i) to vi)) <u>or</u> any fires involving casualties, rescues, <u>or</u> any fire attended by five or more appliances. An appliance is counted if either the appliance, equipment from it or personnel riding on it, were used to fight the fire.</p> <ul style="list-style-type: none"> <li>i) Buildings</li> <li>ii) Caravans, trailers etc.</li> <li>iii) Vehicles and other modes of transport (not derelict)</li> <li>iv) Outdoor equipment and machinery</li> <li>v) Agricultural and forestry premises and property</li> <li>vi) Other outdoor structures including outdoor storage, recycling collection point, post boxes, tunnels, bridges etc.</li> </ul>
<p><b>Secondary fires</b></p>	<p>These are mostly outdoor fires including grassland, woodland, scrub land, tree scrub, roadside vegetation, loose refuse and rubbish containers.</p> <p>Secondary fires :</p> <ul style="list-style-type: none"> <li>• are those fires that are not primary fires (ie fires that: a) were not at the locations listed above ( i)-(vi) ), and b) did not involve casualties or rescues, and c) were attended by four or fewer appliances, and</li> <li>• includes fires in derelict buildings</li> <li>• do not include chimney fires in buildings.</li> <li>• are reported in less detail than other fires and consequently less information about them is available.</li> </ul>

<p><b>Chimney fires</b></p>	<p>These are reportable fires in occupied buildings:</p> <ul style="list-style-type: none"> <li>• where the fire was confined within the chimney structure</li> <li>• that do not involve casualties or rescues</li> <li>• attended by four or fewer appliances.</li> </ul>
<p><b>False Alarm</b></p>	<p>A <i>false alarm</i> is defined as an event in which the fire and rescue service believes they are called to a reportable fire and then on arrival discover that there is no such incident. False alarms are categorised as:</p> <p><b>Malicious</b> – the call was made with the intention of getting the fire and rescue service to attend a non-existent fire-related event. This includes ‘deliberate’ and ‘suspected malicious’ intentions.</p> <p><b>Good Intent</b> – the call was made in good faith in the belief that the fire and rescue service really would attend a fire.</p> <p><b>Due to Apparatus</b> – the call was initiated by fire alarm and fire fighting equipment operating (including accidental initiation of alarm apparatus by person).</p>
<p><b>Location</b></p>	<p>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.</p>
<p><b>Buildings</b></p>	<p>All buildings including those under construction, but excluding derelict buildings or those under demolition. Prior to 1994 'buildings' were referred to as 'occupied buildings'.</p>
<p><b>Dwelling</b></p>	<p>Buildings occupied by households, excluding residential institutions and short-stay accommodation eg hotels/motels and hostels. From 1988, mobile homes have been specifically included in the dwelling count.</p>



	<p>In 2000, the definition of a dwelling (for the purposes of reporting of fires) was widened to include any non-permanent structures used solely as a dwelling, such as caravans, houseboats etc (amounts to about 0.3% of the total number of dwelling fires). This change brings the definition of a dwelling more in line with that required under Best Value legislation. All analyses from 1994 to 1998 relating to dwellings were retrospectively revised to include the new categories of dwellings (prior to 1994 these categories were included in the dwelling count) and published in Home Office Statistical Bulletin 20/00 - "Summary Fire Statistics, United Kingdom, 1999". Caravans, boats etc not used as a permanent dwelling are shown according to the type of property (caravan, vehicle etc.)</p>
<p><b>A reportable fire</b></p> <p>- <i>no specific definition prior to 1994</i></p>	<p>A reportable fire is an event of uncontrolled burning involving flames, heat or smoke and which the fire and rescue service attended.</p>
<p><b>Late fire call</b></p> <p>- <i>no specific definition prior to 1994</i></p>	<p>A fire known to be extinguished when the call was made (or to which no call was made, e.g. a fire which comes to the attention of the fire and rescue service as a result of a press report or inquest) and the fire and rescue service attended. Late fire calls are included as fire in this publication.</p>
<p><b>Source of ignition</b></p>	<p>The source of the flame, spark or heat that started the fire.</p>
<p><b>Spread of fire</b></p>	<p>The extent to which fire damage (as opposed to heat, smoke or other damage) spread, for example, beyond the room of origin.</p>
<p><b>Heat or smoke damage only Incidents</b></p> <p>- <i>no specific definition prior to 1994</i></p>	<p>These are reportable 'fires' where there is no fire damage. The damage reported may be due to any combination of heat, smoke and other which will include any water damage.</p>

<b>Fatal Casualty</b>	<p>Fire fatalities include any fatal casualty which is the direct or indirect result of injuries caused by a fire incident even if death occurred weeks or months later. There are also occasional cases where it transpires subsequently that fire was not the cause of death. For all of these reasons, fatalities data may therefore be subject to revision.</p>
<b>Non-fatal casualty</b>	<p>Non-fatal casualties consist of persons who were</p> <ul style="list-style-type: none"> <li>• given first aid at the scene of the fire</li> <li>• taken to hospital to see a doctor for injuries (appeared to be either serious or slight )</li> <li>• advised to attend hospital or to see a doctor as a precaution when no obvious sign of injury or shock have been observed to the persons (these are recorded as 'precautionary checks').</li> </ul>

<b>Cause of fire</b>	The defect, act or omission leading to ignition of the fire.
<b>Motive</b>	Fires are categorised as: accidental, deliberate or unknown, according to the probable cause, as observed at the scene.
<b>Deliberate</b>	Includes fires where deliberate ignition is merely suspected and recorded by the FRS as "doubtful".
<b>Accidental</b>	Fires that started accidentally. Those recorded as 'not known' are grouped together with 'accidental' for all outputs.

Details of the questions and categories used in the recording of incidents under the new Incident Recording System (IRS) are available in the document IRS Questions and Lists. This can be downloaded from: <https://www.gov.uk/government/publications/incident-recording-system-for-fire-and-rescue-authorities>

Some minor changes to the detailed classifications were implemented in April 2012, the first since the implementation of the Incident Recording System. These do not affect the statistics in this publication, but there may be a slight impact on some of the tables with detailed location categories published in future editions of Fire Statistics Great Britain. Because it is only the lowest levels of sub-categories that have changed, the differences are likely to be negligible, and will only be possible to be identified once data for 2012-13 is produced and presented alongside data for 2011-12. Table 23 (false alarms by detailed reason) will also have some slight changes, which users can anticipate by noting the new detailed sub-categories.

The updated categories are available at <https://www.gov.uk/government/publications/incident-recording-system-for-fire-and-rescue-authorities> . The differences in the classifications are highlighted in red and crossed out text.

The categories in force prior to April 2012 are also available at <https://www.gov.uk/government/publications/incident-recording-system-for-fire-and-rescue-authorities-questions-and-lists-v1-4>

# Technical Notes

## Comparability of data under the Incident Recording System (IRS) and its predecessor, the Fire Data Report system

- 1 The Incident Recording System was adopted nationally by 1 April 2009. Sixteen Fire and Rescue Services switched to the Incident Recording System before this date: Five switched by 1 April 2008. A further three switched in Autumn 2008, and eight switched in the first quarter of 2009. Quality assurance of the data on which this publication is based identified the following two fundamental areas of potential discontinuity arising from the switchover from the old Fire Data Report system, which was largely paper-based, to the new Incident Recording System questions.
- 2 The first area relates to increases (typically slight) in the numbers of certain types of incident within the data of a handful of Fire and Rescue Services, notably in numbers of primary outdoor fires. These are apparently not real increases, but for example they may rather be the result of a small proportion of incidents in the past having been incorrectly reported as being 'secondary fires' rather than 'primary fires'. The following conclusions can be drawn:
  - it appears that these differences follow from incorrect reporting under the old Fire Data Report system
  - the effect on national totals appears to be slight
  - there is no suggestion of difference in completeness of recording of casualties.
- 3 The second area is the possibility of discontinuity in numbers of non-fatal casualties. Though the totals themselves do not suggest change in recording overall, the new categories have clearly affected sub-totals, notably the category 'precautionary check recommended'. This all follows from two improvements to the way in which non-fatal casualties have been recorded since the introduction of the Incident Recording System:
  - a. The first change is that each casualty or fatality can be marked as 'not fire-related'. Around eight per cent of non-fatal casualties were marked as not fire-related in April 2010 to March 2011. However, in fire incidents, almost all non-fatal casualties can be expected to be 'fire-related', since very few would have occurred if there had not been a fire. Due to this concern, those non-fatal casualties marked 'not fire-related' have not been excluded. It is also worth noting that excluding the 8 per cent of non-fatal casualties would have introduced a large discontinuity compared to data from before the introduction of the new Incident Recording System.
  - b. The other potential issue arises since the Incident Recording System collects details of the injury of each non-fatal casualty in two questions, the first

categorising the casualty as one of: '*severe injury (hospital)*', or '*slight injury*', or '*first aid*' or '*precautionary check advised*', while the second question records the type of injury.

This contrasts with the Fire Data Report system where a single question was used instead, with no category for 'first aid'. It appears that casualty cases recorded under Incident Recording System as 'first aid' would have most commonly been recorded under the old Fire Data Report system as 'precautionary check' (see figure 1.7), and a smaller proportion recorded as a specific type of injury. As noted, overall the total of all non-fatal casualty categories (including non-fatal casualties whose severity was either 'first aid' or 'precautionary check recommended' under Incident Recording System) appears to be consistent with totals under the Fire Data Report system.

### Recording during industrial action in 2002 & 2003

- 4 Due to the industrial action by firefighters in November 2002 and January and February 2003 the reporting of fires for these days was disrupted. In total fifteen 24-hour periods were affected;

from 18:00 on 13th to 18:00 on 15th November 2002 (2 days);

from 09:00 on 22nd to 09:00 on 30th November 2002 (8 days);

from 09:00 on 21st to 09:00 on 22nd January 2003 (1 day);

from 09:00 on 28th to 09:00 on 30th January 2003 (2 days);

from 09:00 on 1st to 09:00 on 3rd February 2003 (2 days);

In previous editions of this publication, these gaps were covered by estimates for some tables. Due to resource constraints, it was not possible to include such estimates in this publication.

## Definitions: primary fires, secondary, chimney fires, outdoor fires and false alarms

- 5 “Primary” fires include all fires in buildings, vehicles and outdoor structures or any fire involving casualties, rescues, or fires attended by five or more appliances.
- 6 “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.
- 7 Chimney fires are any fire in an occupied building where the fire was confined within the chimney structure (and did not involve casualties or rescues or attendance by five or more appliances). A false alarm is defined as an event in which the fire and rescue service believes they are called to a reportable fire and then find there is no such incident.
- 8 The term “outdoor fires” used in this Bulletin refers to primary and secondary fires in road vehicles, other outdoor property, derelict buildings and derelict vehicles and more minor refuse, grassland and intentional straw/stubble fires.

## Data for primary fires

- 9 Two categories of fire-related incident have been recorded in the fire statistics from the since 1994. These categories are described as late fire calls and heat and smoke damage only incidents:
  - “**late fire calls**” which are fires not attended as an emergency because they are known to be extinguished when the call was made, or to which no emergency call was made;
  - **heat or smoke damage only ‘fires’** - where no fire damage is reported (see definitions section for fuller explanation).

## English Housing survey/Survey of English Housing

- 10 The English Housing Survey is a continuous national survey that collects information on household, housing circumstances and the condition and energy efficiency of housing in England. In April 2008 the English Housing Survey was created by merging the English Housing Condition survey with the Survey of English housing. In 2004/05 the Survey of English Housing also asked a set of questions about fire-related issues in the home including installation of smoke alarm. A similar module of fire questions was asked in previous years in the British Crime Survey. This information collected on experience of fire provides a valuable source of additional information in measuring the prevalence of domestic fires in England. This is because many of the fires measured by the survey result in little or no damage and consequently are often not brought to the attention of fire and rescue service, thus being outside the scope of those incidents attended and recorded by Fire and Rescue Services. Even fires involving property damage or injury are not always brought to their attention. The

survey data also collects a wide variety of social and demographic information from households, including details about their ethnicity, housing tenure and economic status. The publication 'Fires in the Home' is the result of analysis of these characteristics to identify the groups most likely to experience a fire or least likely to own a smoke alarm.

## Population data

- 11 Population data used in this Bulletin have been provided by the Office for National Statistics (ONS) in the form of mid-year estimates. Further information on the exact changes made to the population estimates can be obtained via the ONS website [www.statistics.gov.uk](http://www.statistics.gov.uk).

## Selection of samples of primary fires

- 12 For incidents between 2004 and March 2009, only a dozen key fields were entered from every Fire Data Report paper form. The details of incidents were entered for all fires with casualties, but for only a proportion of other primary fire incidents attended. Previous editions of this publication provided detail of the sampling and weighting methodology used.

## Revisions

- 13 Revisions will be handled as per the Department for Communities and Local Government revisions policy <http://www.communities.gov.uk/documents/corporate/pdf/1466387.pdf>. This requires explanation of the handling of scheduled revisions due to the receipt of subsequent information in the case of each statistical publication. For this publication, any such revisions will be included in the future as follows:
- 14 Barring exceptional circumstances, revisions will be made only once and will affect only the preceding year's data - i.e. when new provisional 2012-13 data are published for the first time in the 2012-13 edition, then data for 2011-12 will be revised.
- 15 In practice, numbers of fatalities can experience revisions that are small but not insignificant in percentage terms. As noted in the Definitions section, Fire fatalities include any fatal casualty which is the direct or indirect result of injuries caused by a fire incident even if death occurred weeks or months later. Therefore, numbers can be revised by those that die subsequently, and by changes in the information about whether the fatality was caused by the fire. Fire investigations and coroners' findings can both lead to such a revision, for example.
- 16 By contrast, numbers of non-fatal casualties and incidents experience revisions that are very small in percentage terms.



## Revisions in this release

This release includes routine revisions to the 2011-12 data as per the revisions policy above. The scale of revisions to 2011-12 figures compared to when 2011-12 data were published first is laid out on pages 21 and 22 of the 2012-13 Fire Statistics Monitor ([www.gov.uk/government/organisations/department-for-communities-and-local-government/series/fire-statistics-monitor](http://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/fire-statistics-monitor)). This is because Fire Statistics Great Britain is derived from the same snapshot of the Fire and Rescue Incidents data base as the end of financial year edition of the Fire Statistics Monitor.

## Uses and user of these data

17. The data used in this publication and its accompanying spreadsheet annex tables are used to

inform and monitor the impact of fire prevention and safety policy through:

- Identifying the prevalence of fires and fire false alarms, their causes, and their severity, including casualty details
- Showing when fires and casualties occur (seasonality and time of day)
- Highlighting different outcomes (fires and casualties) according to whether smoke alarms were present, and whether they activated
- Showing reasons why smoke alarms failed to operate

The users of fire statistics include Government, Fire and Rescue Authorities, and safety campaign organisations. A list of users who responded to the 2012 Consultation on this publication can be found at: <https://www.gov.uk/government/publications/fire-statistics-user-survey-2012-summary-of-responses>

18. We judge that the quality and reliability of the data are suitable for these uses. Fire and Rescue Incident data are collected across Great Britain under common definitions and guidance. Records undergo quality assurance within each Fire and Rescue Authority where data are also analysed, as well as being submitted to the national data base. The Department of Communities and Local Government published a quality assurance best practice guide in 2010. This was informed by ideas and experience of Fire and Rescue Authorities. The data are also subjected to quality assurance by statistical staff in the Department of Communities and Local Government, Scottish Government and Welsh Assembly Government.

## Symbols

17 Symbols used in the tables are:

- - Not available.
- .. Not applicable.
- p Provisional figures
- r Revised figures
- pmp Per million population

## Links to previous editions of this publication

This publication, as well as previous editions of *Fire Statistics Great Britain* and related publications, can be downloaded free of charge from the Department for Communities and Local Government website

<https://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/fire-statistics-great-britain>

Earlier editions of the predecessor *Fire Statistics UK* publication for the years 2000 to 2008 can be downloaded from:

<http://webarchive.nationalarchives.gov.uk/20121108165934/http://www.communities.gov.uk/fire/researchandstatistics/firestatistics/firestatisticsuk/>

## Related Statistics for Scotland, Wales and Northern Ireland

Fire incident statistics for other UK countries are available as follows:

Scotland: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/PubFires>

Wales: <http://wales.gov.uk/statistics-and-research/fire-statistics/?lang=en>

Northern Ireland: Equivalent data is not available for Northern Ireland. Annual fire incident data is available from: <http://www.nifrs.org/statistics/>

## Links to other Fire Statistics Publications produced by the Department for Communities and Local Government

Fire statistics publications can be accessed via this link

<https://www.gov.uk/government/publications/fire-statistics>

This includes the Department's annual publication on fire response times, and non-financial annual return data, *Fire and Rescue Operational Statistics*.

<https://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/fire-and-rescue-authorities-operational-statistics> This includes headline data on fire prevention and protection activity as well as numbers of staff and fire stations.

## Overseas fire data

Internationally, there are significant variations in the scope of reporting fire incidents, both in definitional terms, and whether such data are collected nationally. The Department commissioned a project examining comparability of fire statistics around Europe, which can be accessed from:

<http://webarchive.nationalarchives.gov.uk/20121108165934/http://www.communities.gov.uk/documents/corporate/pdf/2159418.pdf>

That said, data for other countries can be found at

<https://www.genevaassociation.org/search?Search=fire>, which has a link to the April 2014 edition of their World Fire Statistics Bulletin

<https://www.genevaassociation.org/media/874729/ga2014-wfs29.pdf>

## Enquiries

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