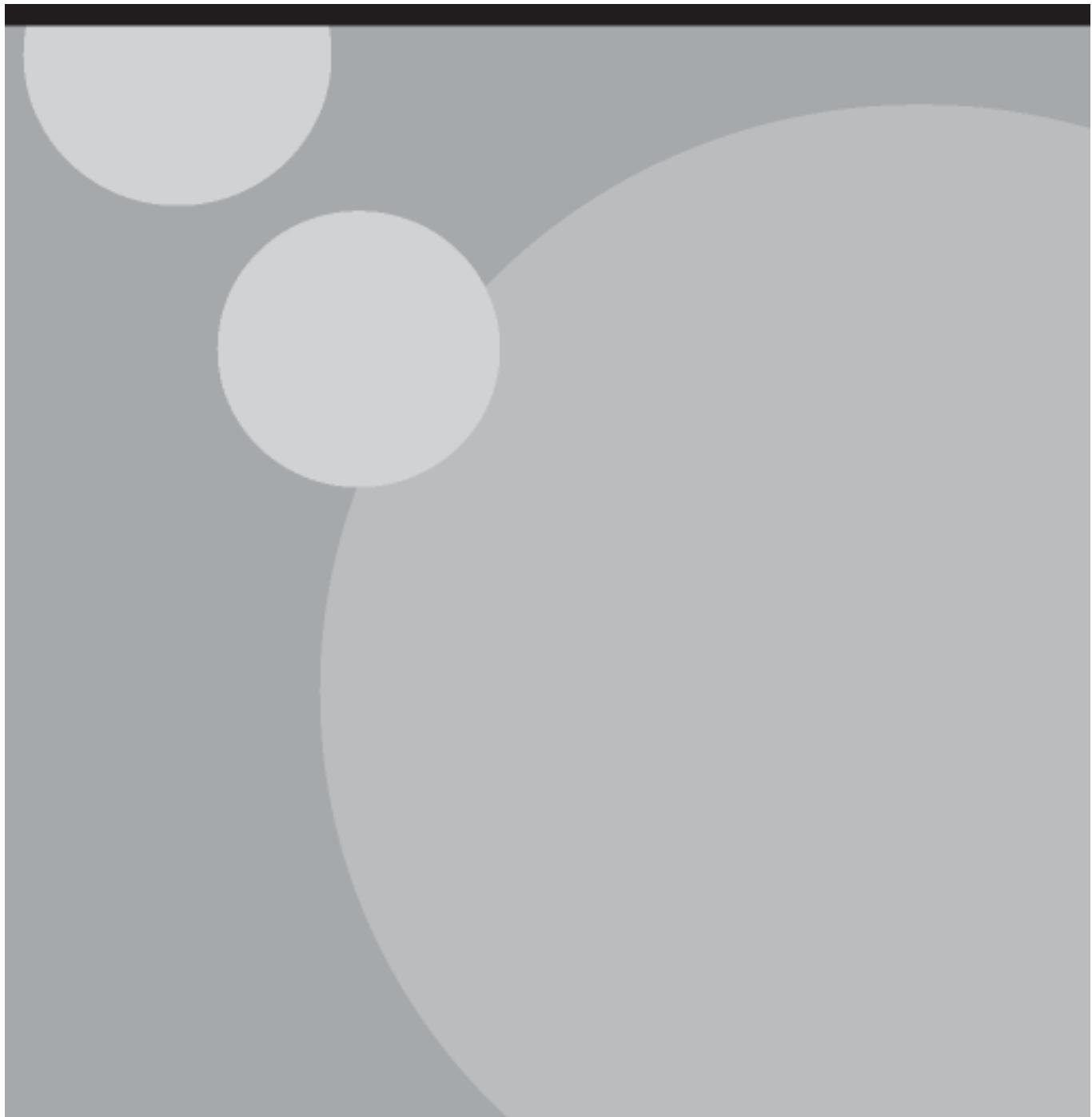




# Fire Statistics

## Great Britain, 2010 - 2011





# Fire Statistics Great Britain, 2010 - 2011

November 2011  
Department for Communities and Local Government

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The Department for Communities and Local Government website at:

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

## Detailed tables

Detail tables referred to in this document are available as separate downloadable files on The Department for Communities and Local Government website at:

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

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## Introduction

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

This publication contains detailed analysis of fires and their causes for 2010-11. Headline data for 2010-11 was published in June 2011 in the Fire Statistics Monitor series.

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

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.

Reproducing many of the tables required substantial redevelopment because information is collected in different sequences of questions under the new Incident Recording System. This meant that it was not possible to develop the publication as much as intended.

Nevertheless it contains the following new content:

- eight maps showing rates of incidents and casualties
- analysis of fires in buildings where sprinklers were present
- non-fire incidents

It is intended that the content of future editions will evolve substantially in order to cover analysis across the range of information collected under the new Incident Recording System. The next edition of this publication will be for the period April 2011 to March 2012 and will be published by Autumn 2012.

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

<http://www.communities.gov.uk/fire/researchandstatistics/firestatistics/firestatfeedback/>

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<sup>1</sup> Previous editions of this publication have been for the UK. The new Incident Recording System, which was adopted by Fire and Rescue Services across Great Britain by April 2009, is currently being piloted in Northern Ireland.

# Key Points 2010-11

NB: Headline data up to March 2011 is available at

<http://www.communities.gov.uk/publications/corporate/statistics/monitorq1q42011>

## Overview

- In 2010-11 Fire and Rescue Services attended 624,000 fires or false alarms in Britain, 5% fewer than in 2009-10 (para 1.1).
- A total of 287,000 fires were attended, 4% fewer than in 2009-10. Around 72% were outdoor fires (207,000), e.g. vehicles, refuse, grassland. A total of 45,000 (16%) were fires in dwellings (para 1.1, 1.2 & 5.1).
- The total number of *accidental* primary fires fell by 4% to 75,500 in 2010-11 – the lowest recorded in this last 14 year period (para 1.7). *Deliberate* fires decreased by 18% to 36,000 (para 1.8).

## Deaths from fires

- In 2010-11, there were 388 fire-related deaths in Britain, 28 fewer than in 2009-10. The highest number recorded was 1,096 deaths in 1979. Through the 1980s and 1990s there was a general downward trend. The 2010-11 figure is at the lowest level since the late 1950s (para 1.10).
- The majority of fire-related deaths occurred in dwelling fires (para 1.12). Fire fatality rates are higher for people aged 80+ and for males, and in Scotland (para 1.14 & 1.26).

## Non-fatal casualties

- There were 11,100 non-fatal casualties in fires in Britain in 2010-11. This was 5 per cent higher than the number recorded in 2009-10, though still 3 per cent lower than in 2008-09 and lower than any other year in the last two decades. Numbers of non-fatal casualties in 2010-11 stood 22 per cent lower than in 2000/01. (para 1.15).

## Dwelling Fires

- The number of dwelling fires in Britain totaled 45,000 in 2010-11 – a fall of 5% since 2009-10. The majority of dwelling fires were *accidental* (86%), 38,500 fires (para 2.1 & 2.2).

## Accidental dwelling fires

- The main cause of accidental dwelling fires remained the misuse of equipment/appliances (14,700 fires), while the main source of ignition was cooking appliances which accounted for half of all accidental dwelling fires) (para 2.3 & 2.5).

## Deaths in dwelling fires

- Of the 306 deaths in dwellings in 2010-11, 268 (88%) were of accidental causes. The main cause was careless handling of fire or hot substances (e.g. careless

disposal of cigarettes), amounting to 39% of all deaths due to accidental causes (para 2.7 & 2.8). The highest fatality rate is for fires which started in the living or dining room (para 2.21).

### **Non-fatal casualties in dwelling fires**

- Of the 8,900 non-fatal casualties in dwelling, the largest cause of injury in accidental dwelling fires was the misuse of equipment and appliances (2,400 injuries) (para 2.14 & 2.15).

### **Smoke alarms**

- Research shows that smoke alarm ownership increased rapidly from 8% in 1988 to 70% in 1994, and has continued to rise in recent years to 86% in 2008 (para 2.26).
- No smoke alarm was present in 16,400 (37% of) dwelling fires (para 2.27).

## **Other Building Fires**

- In 2010-11 there were 24,900 fires recorded in buildings other than dwellings, 6% fewer than in 2009-10. Of these, 65% were accidental compared to over 85% of those in dwellings (para 3.1 & 3.3).
- Nineteen people died and there were 1,200 injuries in fires in buildings other than dwellings. (para 3.2 & 3.8).

## **Road Vehicle Fires**

- Road vehicle fires totaled 32,500 in 2010-11 – a decrease of 16% from 2009-10. This is the lowest number of road vehicle fires since the mid nineteen eighties (para 4.1).
- In 2010-11 there were 44 fatalities and 520 non-fatal casualties in road vehicle fires (para 4.5 & 4.6).

## **False Alarms**

- There were 337,300 false alarms attended in 2010-11, a decrease of 5% from 2009-10 and one third lower than the peak level of 507,000 in 1995 (para 6.1).
- The most common type of false alarm was due to apparatus, representing over two thirds of all false alarms in 2010-11 (para 6.2).

## **Non-fire incidents**

- Fire and Rescue Services attended 154,000 non-fire incidents in 2010-11 (para 7.1).
- The most common type of non-fire incident was road traffic incidents. These accounted for just under a quarter (23%) of all non-fire incidents in 2010-11 (para 7.1).

## Chapter 1 – Summary

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

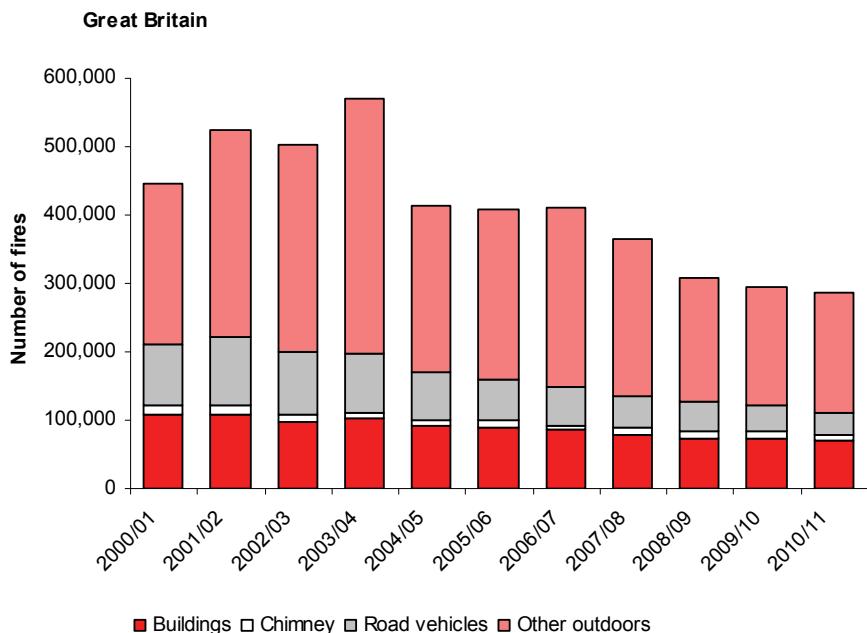
- 1.1 In 2010-11, local authority fire and rescue services attended 623,800 fires or false alarms in Britain, 5% less than the 2009-10 figure of 653,600. Within this total, fires decreased by 4% to 286,500, while false alarms fell by 5% to 337,300.

**Table 1.1: Fires by location, 2000/01-2010/11**

Great Britain		Fires and false alarms (thousands) <sup>1</sup>						
Year	Total fires & false alarms	Fires <sup>2</sup>					False alarms	
		Fires <sup>2</sup>	Building fires			Outdoor Fires <sup>3</sup>	Chimney fires	
			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	624	287	70	45	25	207	10	337

<sup>1</sup> Figures are rounded and the components do not necessarily sum to the independently rounded totals.  
<sup>2</sup> Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling.  
<sup>3</sup> Primary and secondary fires.

- 1.2 A total of 286,500 fires were attended in 2010-11, of which 44,700 (16%) were in dwellings. Findings from the 2004/05 Survey of English Housing on all outbreaks of fire experienced by households in England suggested that the fire and rescue service attend approximately one fifth of all domestic fires. This is because many of the fires recorded in the survey are minor and able to be put out by someone in the home, and therefore the fire and rescue service were not called. See ODPM Statistical Bulletin - "Fires in the home: Findings from the 2004/05 Survey of English Housing". (See explanatory note 11 for further details.)

**Figure 1.1: Fires by location group 2000/01 – 2010/11**

- 1.3 The number of building fires fell by 6% from 73,700 in 2009-10 to 69,600 in 2010-11. This follows the long term downward trend in building fires over the preceding decade. Within this category, dwelling fires fell by 5% to 44,700. Fires in buildings other than dwellings also fell, by 6% to 24,900.
- 1.4 Outdoor fires (primary and secondary) totalled 207,000 in 2010-11. Of these 87,000 (42%) were refuse fires (including derelict vehicles), 32,500 (16%) were road vehicle fires and 61,300 (30%) were grassland fires (including heathland and intentional straw and stubble burning). The remaining 26,300 were in other outdoor locations. See explanatory note 7 for the definition of a primary and secondary fire.
- 1.5 Chimney fires totalled 10,000 in 2010-11, no change on the previous year.

## Causes of fires

### Interpretation of trends in accidental and deliberate fires

- 1.6 Fires are categorised as one of: 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.

**Table 1.2: Primary fires by cause and location of fire, 2000/01-2010/11**

Great Britain		Fires (thousands)			
Year	Total <sup>1</sup>	Location			
		Dwellings	Other building s	Road vehicle s	Other outdoor s
<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	35.9	6.2	7.3	17.0	5.3
<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	75.5	38.5	17.5	15.5	4.0

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

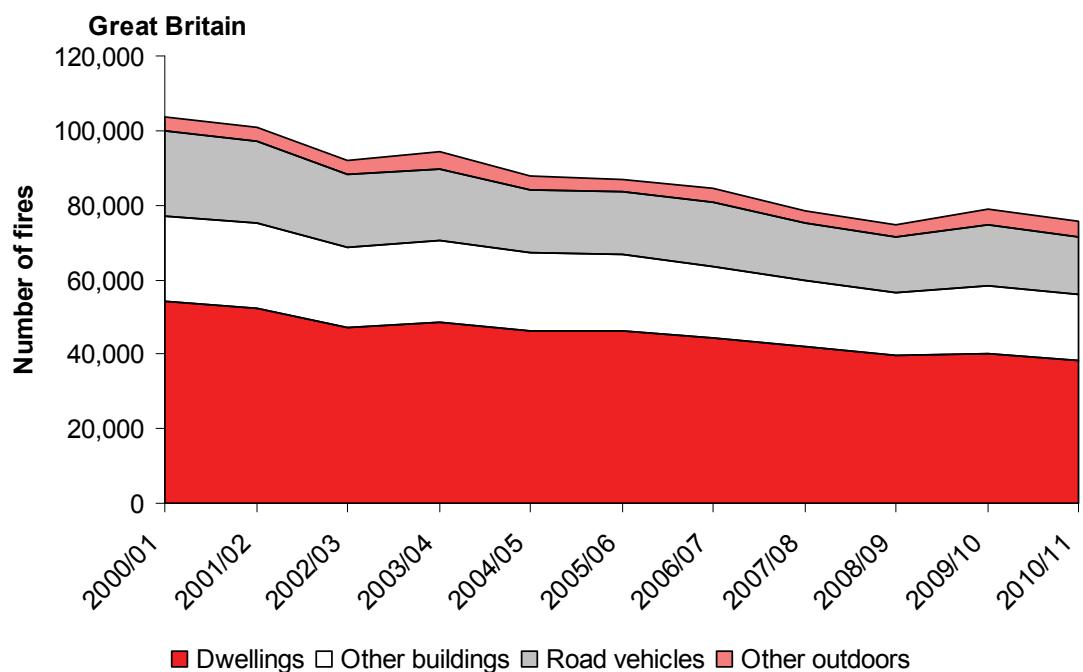
<sup>2</sup> Deliberate fires include fires where deliberate ignition was merely suspected. Accidental fires include those where the cause was 'not known' or 'unspecified' (see explanatory notes).

## Accidental fires (Table 1.2, Figure 1.2)

- 1.7 The total number of accidental primary fires in 2010-11 decreased by 4% to 75,500. Of the total accidental fires, 38,500 fires (51%) were in dwellings, 17,500 (23%) in other buildings and 15,500 (20%) in road vehicles. Accidental primary fires have now fallen year on year since 2003/04 and the 2010/11 total number of accidental primary fires is down by a quarter since the decade peak in 2000/01.

The key changes from 2009-10 were:

- Accidental fires in dwellings fell by 4% to 38,500
- Accidental fires in other buildings fell by 2% to 17,500
- Accidental fires in road vehicles also fell, down 6% to 15,500.

**Figure 1.2: Accidental fires by location group, 2000/01-2010/11**

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

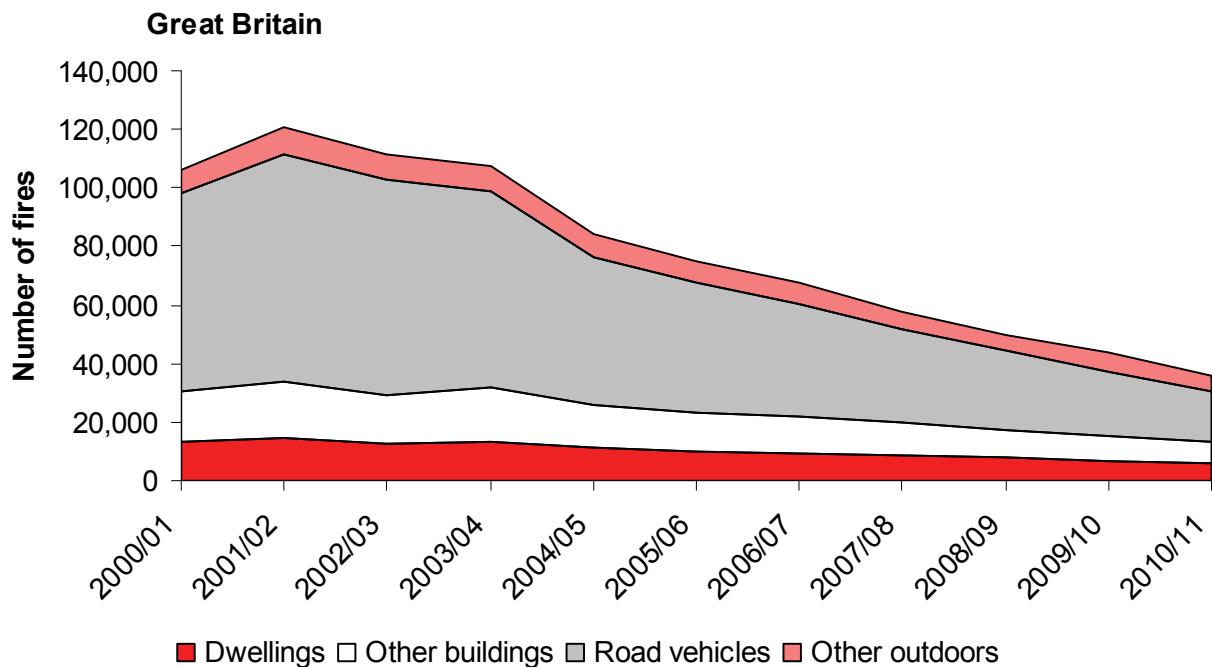
- 1.8 The number of deliberate primary fires fell for the ninth consecutive year, from 43,600 in 2009-10 to 35,900 (18%) in 2010-11.

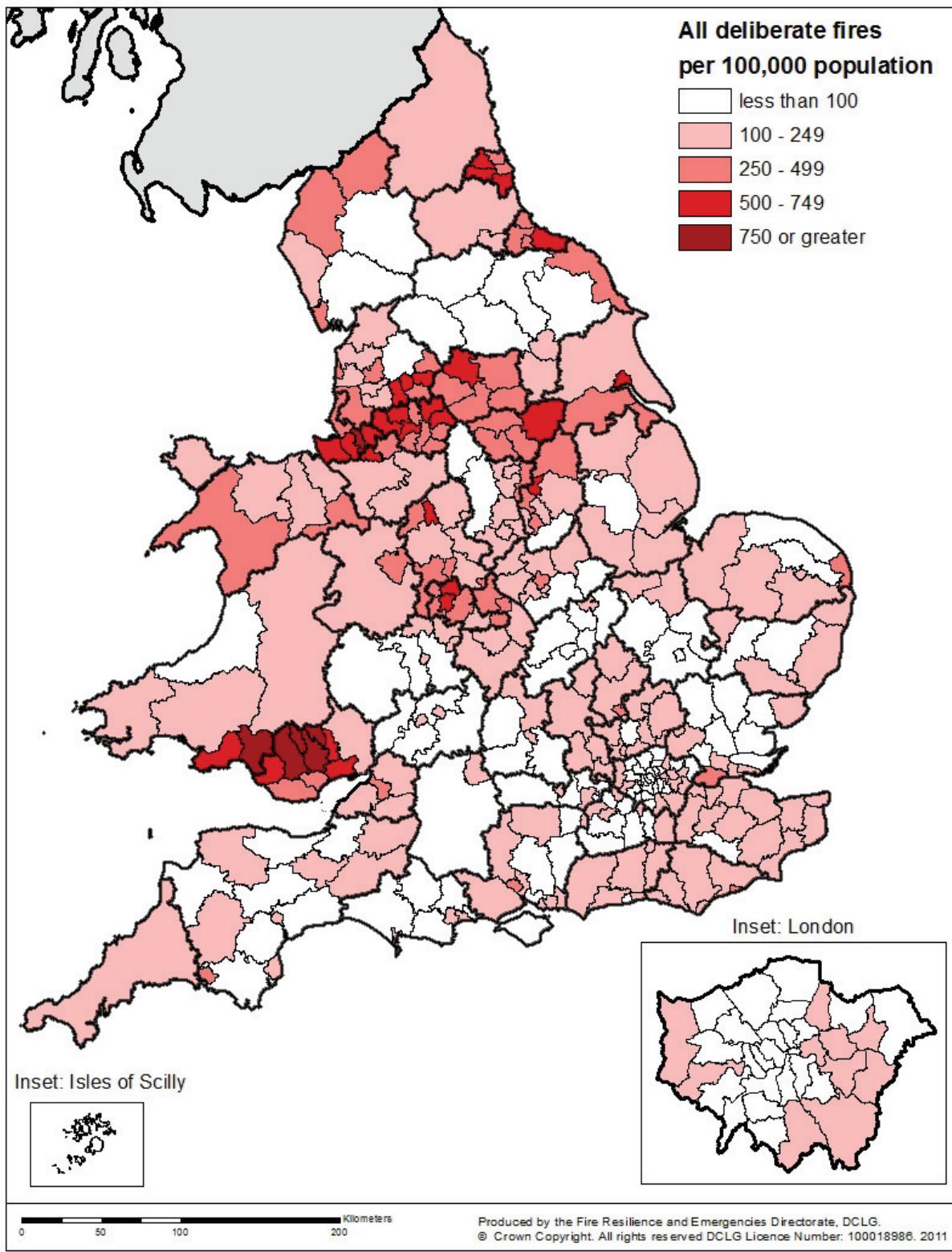
There was a decline in deliberate fires in all locations:

- Deliberate fires in dwellings fell by 10% to 6,200
- Deliberate fires in other buildings fell by 14% to 7,300
- Deliberate fires in road vehicles also fell by 23% to 17,000.

- 1.9 Of the 13,500 deliberate fires in buildings recorded in 2010-11, more than half (54%) occurred in buildings other than dwellings. Of these 7,300 deliberate fires in other buildings, over a third occurred in private garages or sheds. Chapter 3 contains further details of deliberate fires in other buildings.

**Figure 1.3: Deliberate fires by location group, 2000/01 – 2010/11**



**Map 1.1: All deliberate fires per 100,000 population, 2010-11**

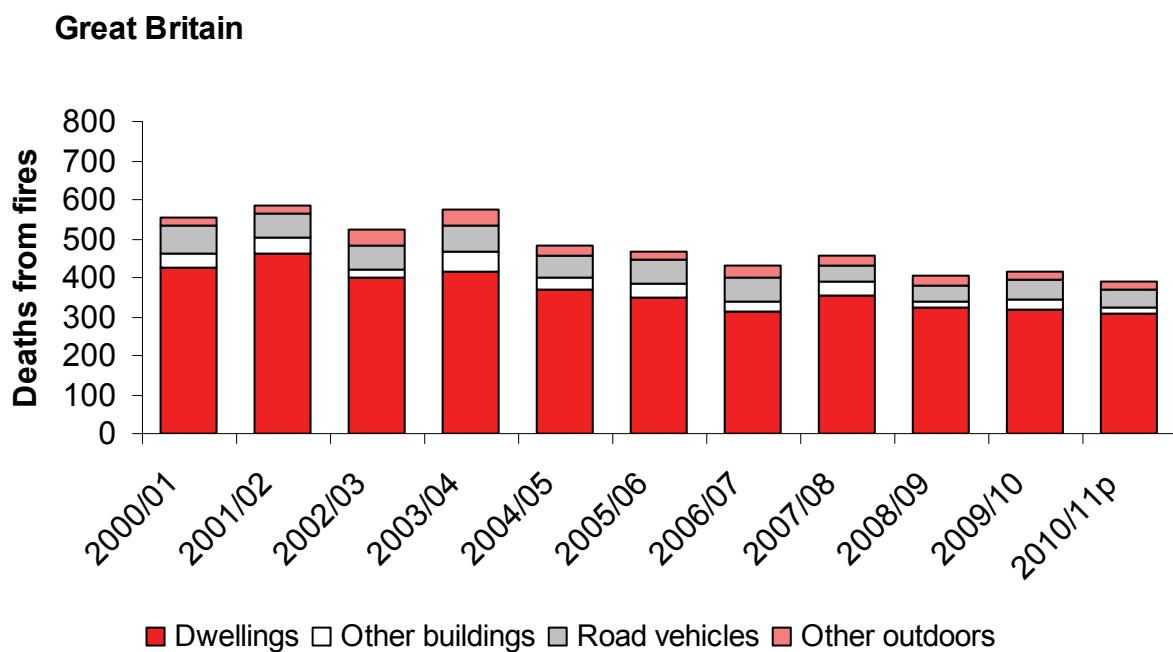
## Deaths from fires (Table 17a)

- 1.10 In 2010-11, there were 388 fire-related deaths in Britain, down from 416 in 2009-10. There were 2 fire-related firefighter fatalities in 2010-11 – compared with zero in 2009-10. The long term trend in fire-related deaths has been downward.

### Location (Tables 6 and 26, Figure 1.4)

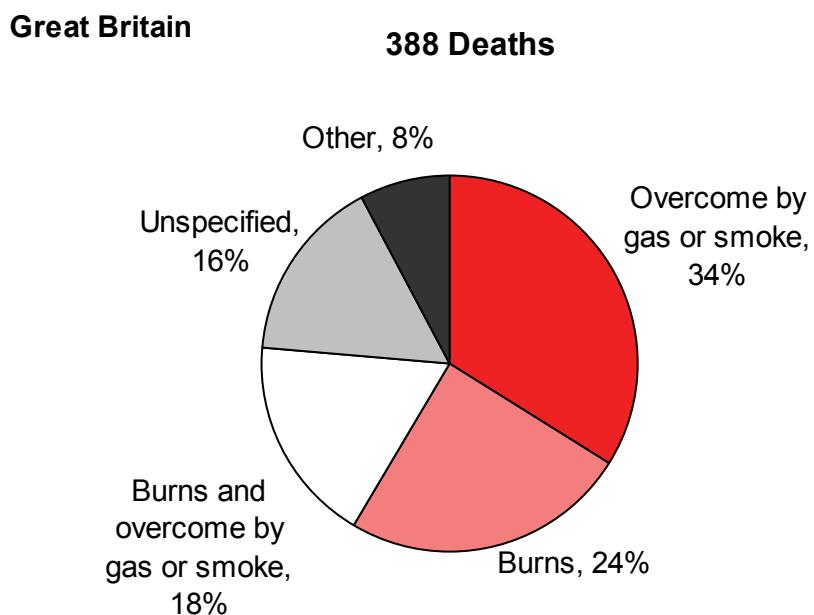
- 1.11 The majority of fire-related deaths (over three-quarters) occur in dwelling fires. In 2010-11, 306 deaths were recorded in dwellings, down by 13 from 2009-10. The peak in dwelling deaths occurred in 1979 with 865 deaths in dwellings recorded that year. As in previous years, dwellings also had more fire related deaths per 1,000 fires than any other location. In 2010-11 there were 6.8 deaths per 1,000 dwelling fires, compared with less than 1 per 1,000 fires in other buildings and 1.4 per 1,000 road vehicle fires.

**Figure 1.4: Deaths from fires by location group, 2000/01 – 2010/11**



**Cause of death (Table 7, Figure 1.5)**

- 1.12 The most common identified cause of death from a fire incident is being overcome by gas or smoke. In 2010-11, fire and rescue services reported that 132 people died this way, accounting for 34% of all deaths. A further 69 (18%) deaths were attributed jointly to both burns and being overcome by gas or smoke, whilst 95 (24%) were due to burns alone.

**Figure 1.5: Deaths by cause, 2010/11**

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

- 1.13 The fire fatality rate is defined as the number of deaths per million population, abbreviated henceforth to pmp.

**Table 1.3: Fatal casualties from fires by age and gender, 2005/06-2010/11<sup>1</sup>**

Great Britain												
Age	Number of fatalities						Per million population <sup>1</sup>					
	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010/ 11p	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11
<b>Persons by age<sup>2</sup></b>												
Under 1	3	1	4	3	-	5	4	1	5	4	-	6
1 – 4	12	15	7	6	-	6	5	6	3	2	-	2
5 – 10	12	5	3	8	-	12	3	1	1	2	-	3
11 – 16	10	5	4	5	-	0	2	1	1	1	-	0
17 – 24	26	23	28	24	-	15	4	4	4	4	-	2
25 – 29	16	19	24	15	-	10	4	5	6	4	-	2
30 – 59	199	156	190	155	-	166	8	6	8	6	-	7
60 – 64	31	27	30	24	-	31	10	9	9	7	-	8
65 – 79	83	84	89	88	-	72	12	12	13	13	-	10
80 & over	66	74	66	74	-	71	25	28	25	27	-	25
Unspecified	12	21	13	10	..	..	..	..	..	..	..	..
<b>All ages</b>	<b>470</b>	<b>430</b>	<b>458</b>	<b>412</b>	<b>416</b>	<b>388</b>	<b>8</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>6</b>
Males, all ages	305	275	284	249	-	228	11	10	10	9	-	8
Females, all ages	165	151	174	158	-	155	6	5	6	5	-	5

<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> Including some fatal casualties, whose gender was not recorded.

- Data not available

- 1.14 Fatality rates are higher for males than females - in 2010-11 there were 8 male fatalities pmp compared to 5 female fatalities pmp. The highest fatality rates occur for those people aged 80 and over (25 pmp). The lowest rates occur for those aged 11 to 16.

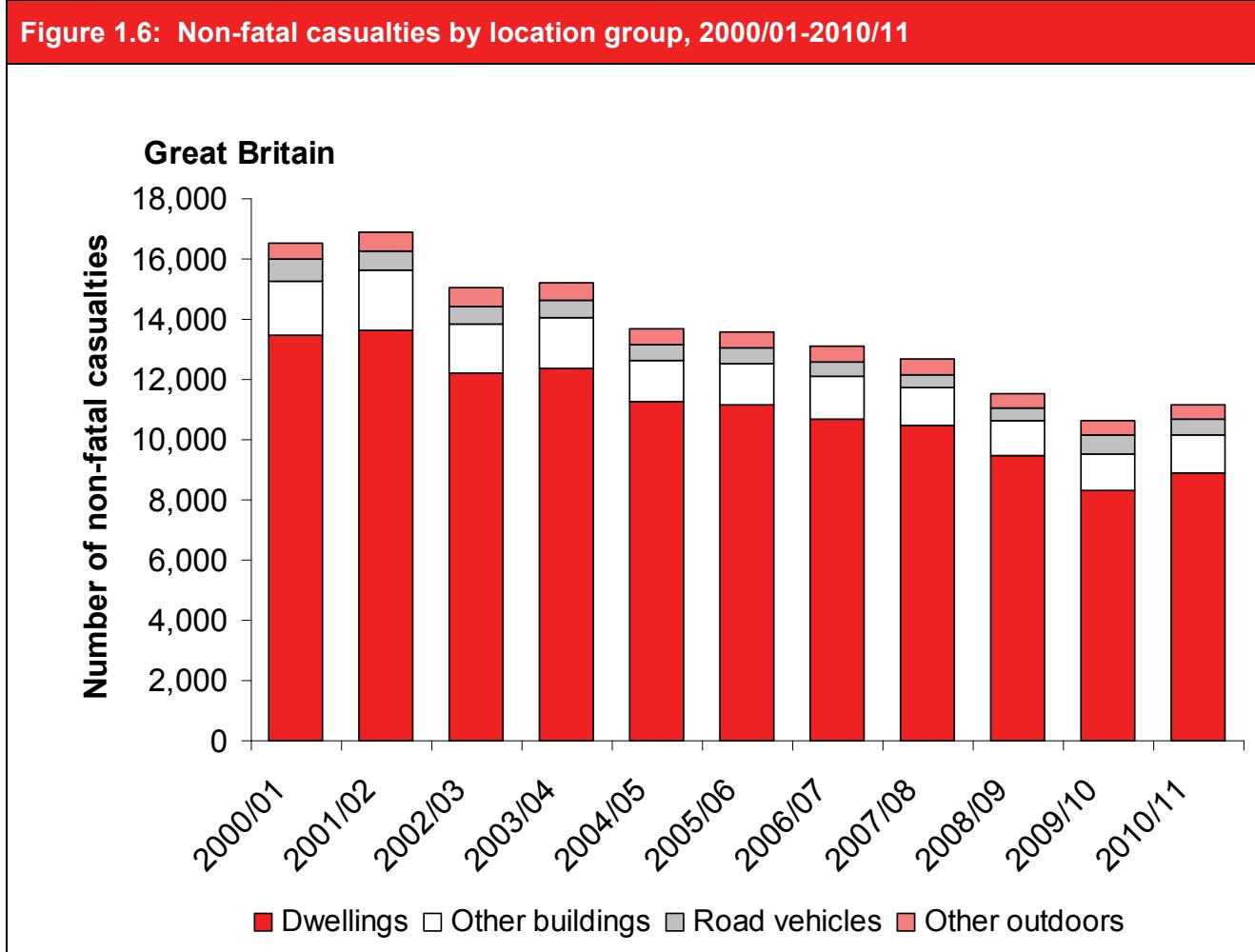
## Non-fatal casualties

- 1.15 There was a 5% decrease in the number of non-fatal casualties to 11,100 in 2010-11, maintaining a continuing annual fall and is now at the lowest since the mid 1980s .

### Location (Table 6, Figure 1.6)

- 1.16 Dwelling fires were responsible for the majority of fatal and non-fatal casualties (80% in 2010-11). In 2010-11, there were 8,900 non-fatal casualties in dwelling fires. This is 13% higher than the previous year.

**Figure 1.6: Non-fatal casualties by location group, 2000/01-2010/11**

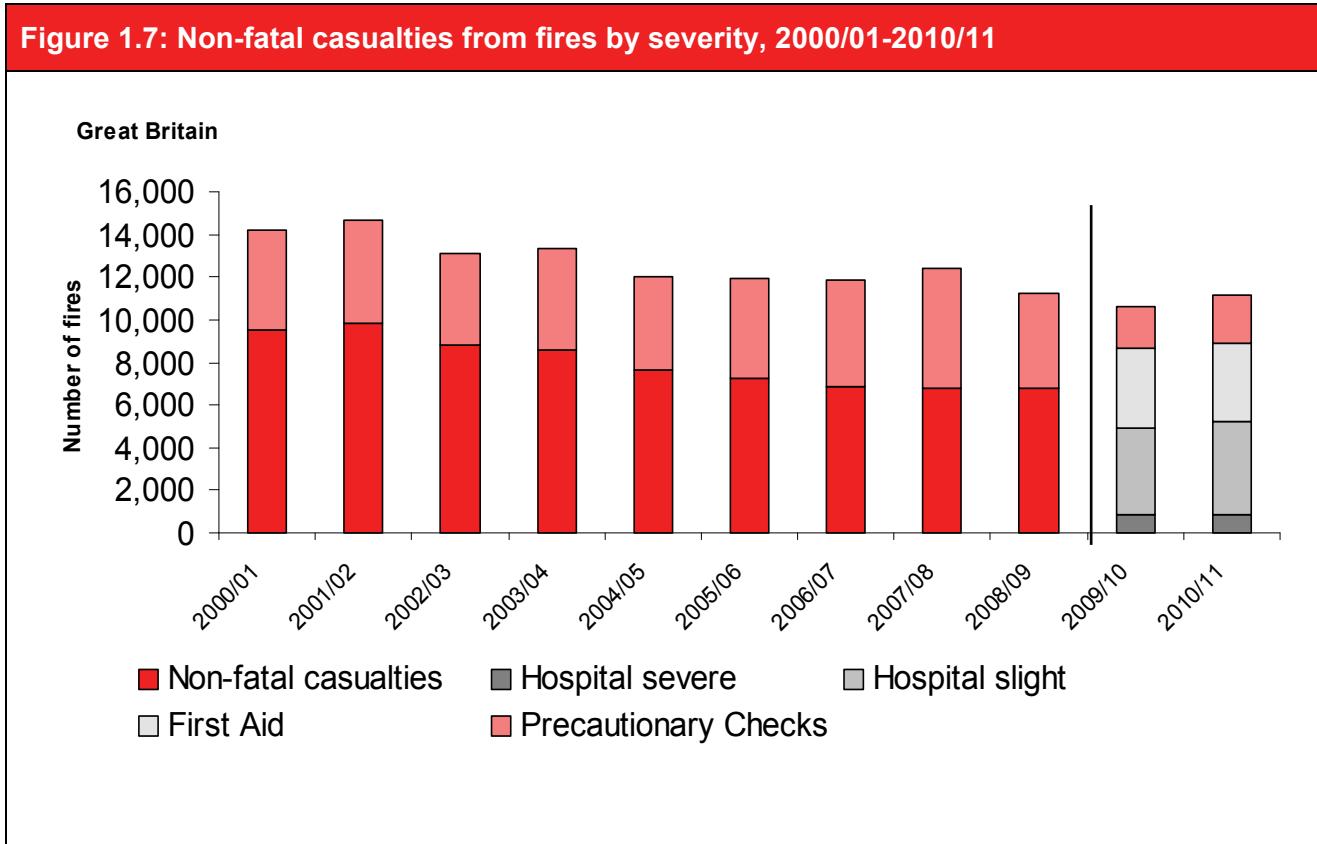


- 1.17 Similarly, dwelling fires had more non-fatal casualties per 1,000 fires than any other location. In 2010-11, there were 199 non-fatal casualties per 1,000 dwelling fires, compared with 49 per 1,000 for other building fires and 16 per 1,000 for road vehicle fires.

## Severity (Figure 1.7)

- 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 2010-11 the most frequent non-fatal severity recorded was hospital slight, accounting for 39% of the total.

**Figure 1.7: Non-fatal casualties from fires by severity, 2000/01-2010/11**



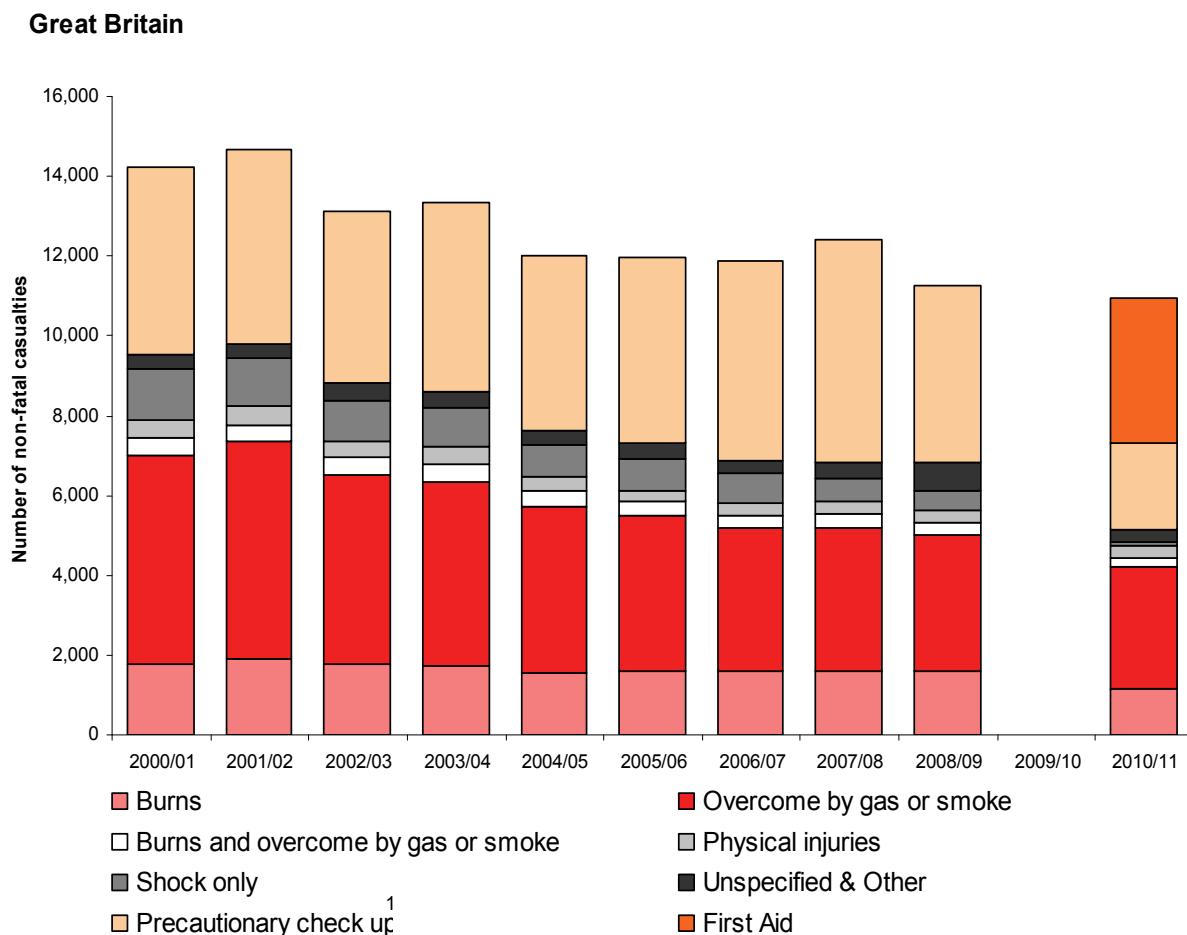
## Nature of injury (Table 8, Figure 1.8)

- 1.19 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 are explained in the section 'Comparability' at the back of this publication. In 2010-11 the most frequent non-fatal injury recorded was 'victim to hospital with slight injuries', accounting for 39% of the total.

Other types of injury sustained include:

- Suffering the effects of gas or smoke, totaling about 3,060 and accounting for 26% of all non-fatal casualties in 2010-11
- Burns, including those suffering from both burns and overcome by gas or smoke totaled 1,372 (12% of all non-fatal casualties in 2010-11).

**Figure 1.8: Non-fatal casualties from fires (excluding firefighter casualties) by nature of injury, 2000/01-2010/11**

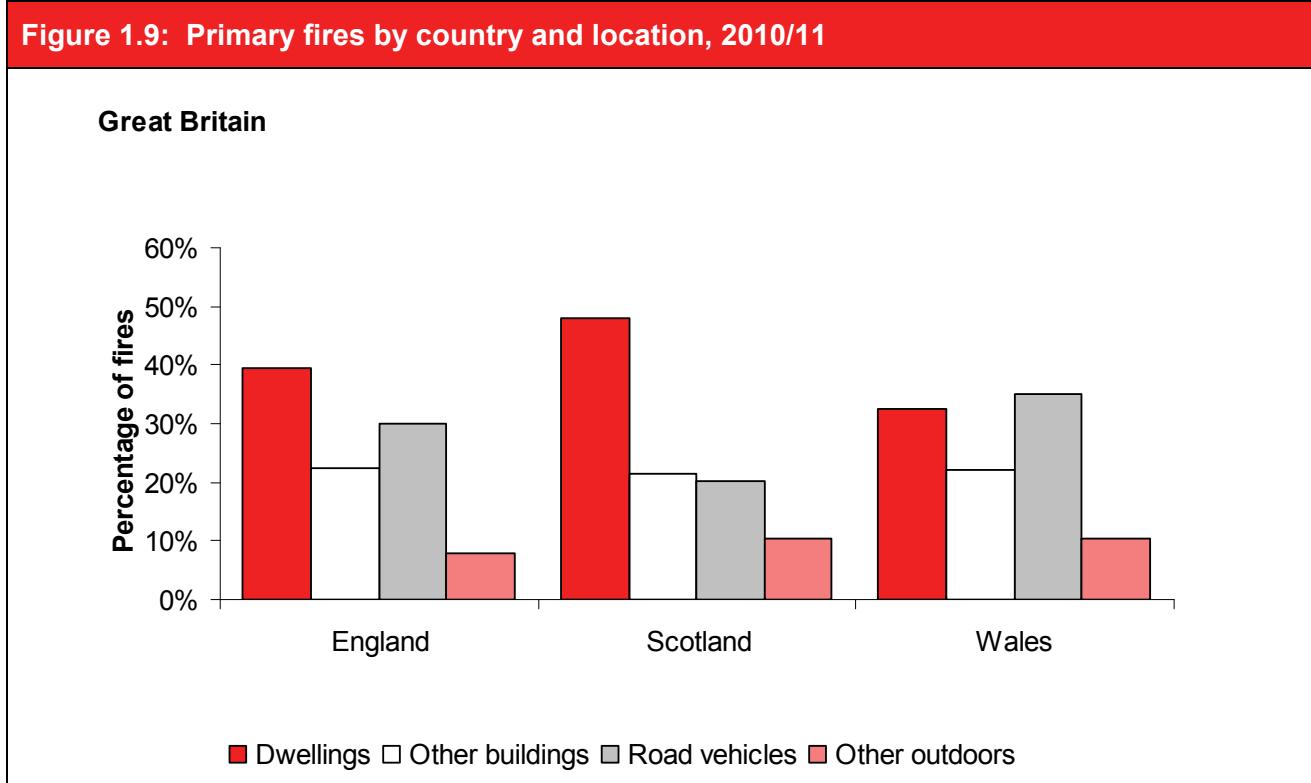


## Country and fire and rescue service area

### Primary fires (Tables 5a and 23a, Figure 1.9)

- 1.20 All countries in Britain experienced declines in the number of primary fires attended in 2010-11 (see explanatory note 7 for definition of a primary fire). In England numbers fell by 10% from 101,700 in 2009/10 to 91,800 in 2010-11, while Wales saw an 8% decline to 6,300 in 2010-11. The number of primary fires in Scotland fell by 6% to 13,200.

**Figure 1.9: Primary fires by country and location, 2010/11**



- 1.21 The location profile of primary fires differs between countries. In Scotland, 48% of all primary fires were in dwellings, compared with smaller proportions in, England (40%) and in Wales (32%). Road vehicle fires exhibited a different pattern. In Wales road vehicle fires constituted the largest proportion of primary fires (35%); in England these constituted 30%, but only made up 20% of the total in Scotland.
- 1.22 The location profile broken down by fire and rescue service area also differs. All the Scottish areas recorded a high proportion of primary fires in dwellings (ranging from 41% to 54%). In England in metropolitan fire and rescue service areas a large proportion of primary fires tend to be dwelling fires, with the highest percentage in Greater London (50%). Among the non-metropolitan areas, (with the exception of the Isles of Scilly) Lancashire recorded the highest proportion of dwelling fires (46%). The highest proportions of road vehicle fires attended were in Warwickshire (41%), Cleveland (40%), and South Wales (39%), South Yorkshire (39%), Kent (39%) and Avon (39%).

### Secondary fires (Tables 5a and 23b)

- 1.23 England, Scotland and Wales recorded an increase in secondary fires in 2010-11 compared to 2009-10, (see explanatory note 7 for definition of a secondary fire). In

England numbers rose by 2% to 165,200, while in Scotland the increase was 5% (to 24,200) and the increase in Wales was 15% (to 13,300).

- 1.24 In 2010-11 refuse and derelict vehicle fires accounted for around 40% of all secondary fires in the UK. Grassland fires (including intentional straw and stubble burning) contributed a further 30% and derelict building fires accounted for 9%.

### **Chimney fires (Tables 5a and 23b)**

- 1.25 There were 9,900 chimney fires in Britain in 2010-11, an increase of 4% compared to 2009-10.

### **Fatalities (Table 5b)**

- 1.26 There were 388 fire-related deaths in Britain in 2010-11, of which 321 (83%) occurred in England. The fatality rate in fires in Britain in 2010-11 was 6.4 per million population (pmp). Fatality rates differ noticeably between countries:

- Scotland has had a consistently higher fatality rate over the years compared to Britain, currently at 9.0 per million population
- The rate in Wales decreased from 7.7 per million population in 2009-10 to 6.7 pmp in 2010-11
- In England the rate decreased from 6.5 per million population in 2009-10 to 6.2 pmp in 2010-11

### **Non-fatal casualties and rates by country (Table 5b)**

- 1.27 The number of non-fatal casualties in England rose by 4% in 2010-11 to 9,300 from 8,900 in 2009-10. The number of non-fatal casualties in Wales rose by 1% to 580 and rose by 7% in Scotland to 1,300.

- 1.28 Reflecting the increase in the number of non-fatal casualties in Britain, the non-fatal casualty rate per million population (pmp) also rose, from 178 in 2009-10 to 184 in 2010-11. This is the lowest rate in over 20 years. By country, the non-fatal casualty rates were:

- England, from 163 per million population in 2009-10 up to 180 pmp in 2010-11
- Wales, from 192 per million population in 2009-10 up slightly to 193 pmp in 2010-11
- Scotland, from 233 per million population in 2009-10 up to 248 pmp in 2010-11

### **Non-fatal casualty rates by fire and rescue service area (Table 22)**

- 1.29 As in previous years, some of the highest non-fatal casualty rates in England were in the metropolitan fire and rescue service areas - Greater Manchester (453 pmp) and the West Midlands (274 pmp). In Scotland, Lothian and Borders had the highest rate (391 pmp) followed by Grampian (309 pmp). The highest casualty rate in Wales was in North Wales (321 pmp). The highest rate recorded by an English non-metropolitan fire and rescue service was in Humberside (284 pmp). The lowest rate recorded (excluding Isles of Scilly) was in Warwickshire (69 pmp).

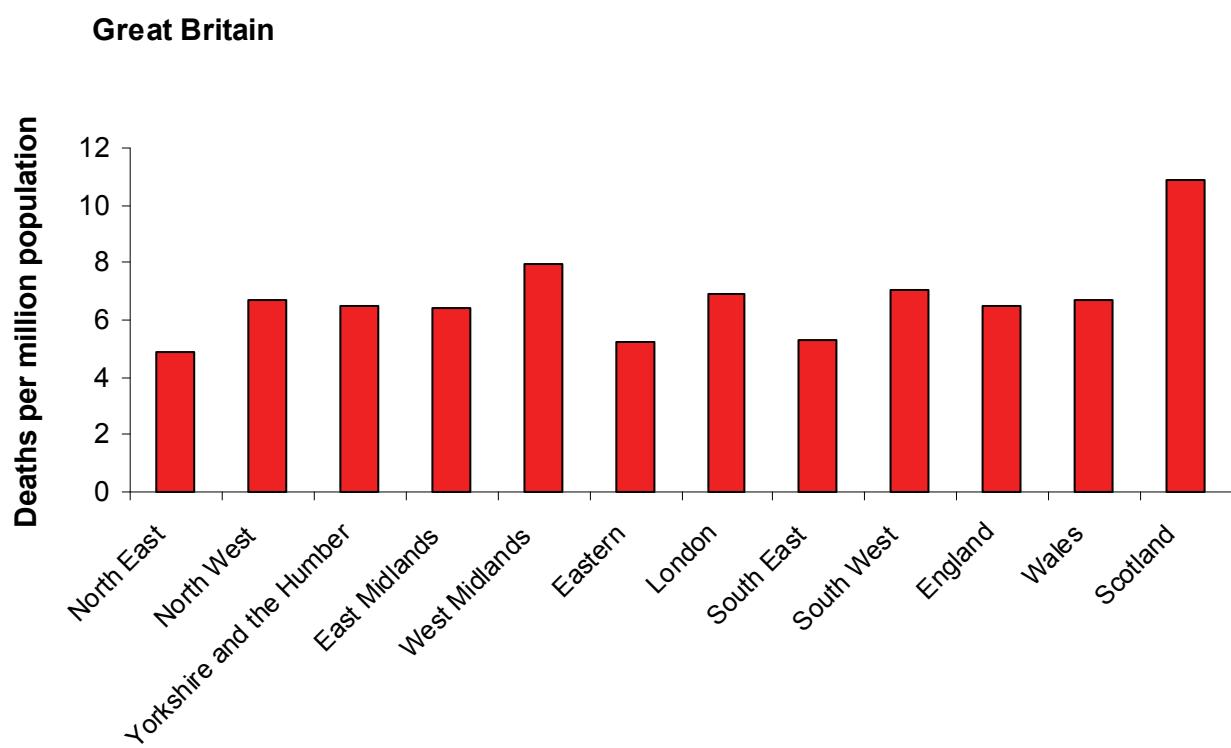
## Country and regional data

- 1.30 Data for 2010-11 for primary fires, deaths and injuries have been aggregated to country and regional level totals and are shown in table 29. Breakdowns by cause, whether accidental or deliberate, are shown in tables 30 and 31.

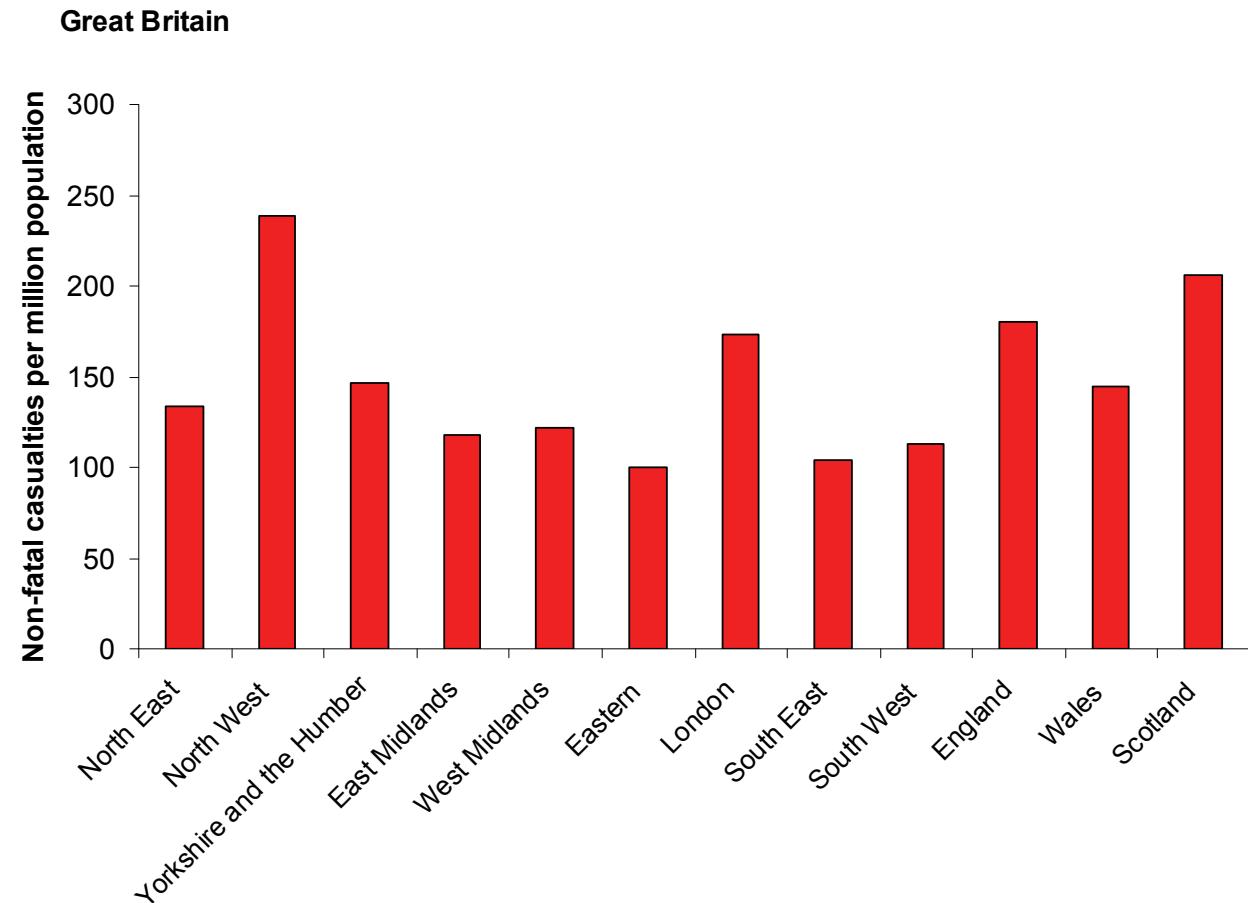
### Casualties and rates (Table 29 and Figures 1.10 and 1.11)

- 1.31 Figure 1.10 shows the average fatality rate for each region for 2008-09 to 2010-11. Scotland had the highest rate at 10.9 deaths pmp. The next highest was in the West Midlands with 7.9 deaths pmp. The North East region had the lowest average fatality rate at 4.9 deaths pmp. The average for Britain was 6.8 pmp.

**Figure 1.10: Fatality rates by region, 2008/09-2010/11 average**



- 1.32 Figure 1.11 shows the 2010-11 non-fatal casualty (excluding precautionary checks) rates by region. The North West had the highest rate at 239 pmp. This is due to the high rates in Greater Manchester and Merseyside. The lowest rates were in the Eastern (100 pmp) and the South East (104 pmp) regions. These compare to the average of 147 pmp in Britain.

**Figure 1.11: Non-fatal casualty (excluding precautionary checks) rates by region, 2010/11**

## Chapter 2 - Dwellings

### Introduction (Tables 2 and 6)

- 2.1 Primary dwelling fires account for over half of all building fires and around 80% of all casualties occur in fires in the home. (See explanatory notes for further information on the definitions of primary and dwelling fires.) Overall, the number of primary dwelling fires fell by 5% to 44,700 in 2010-11, continuing the downward trend since 1999. The number of deaths in such fires was 306, down 13 in 2010-11 on the previous year. There was a 5% fall compared with 2008-09 in the number of non-fatal casualties in fires in dwellings to 8,900.

### Accidental fires (Table 2)

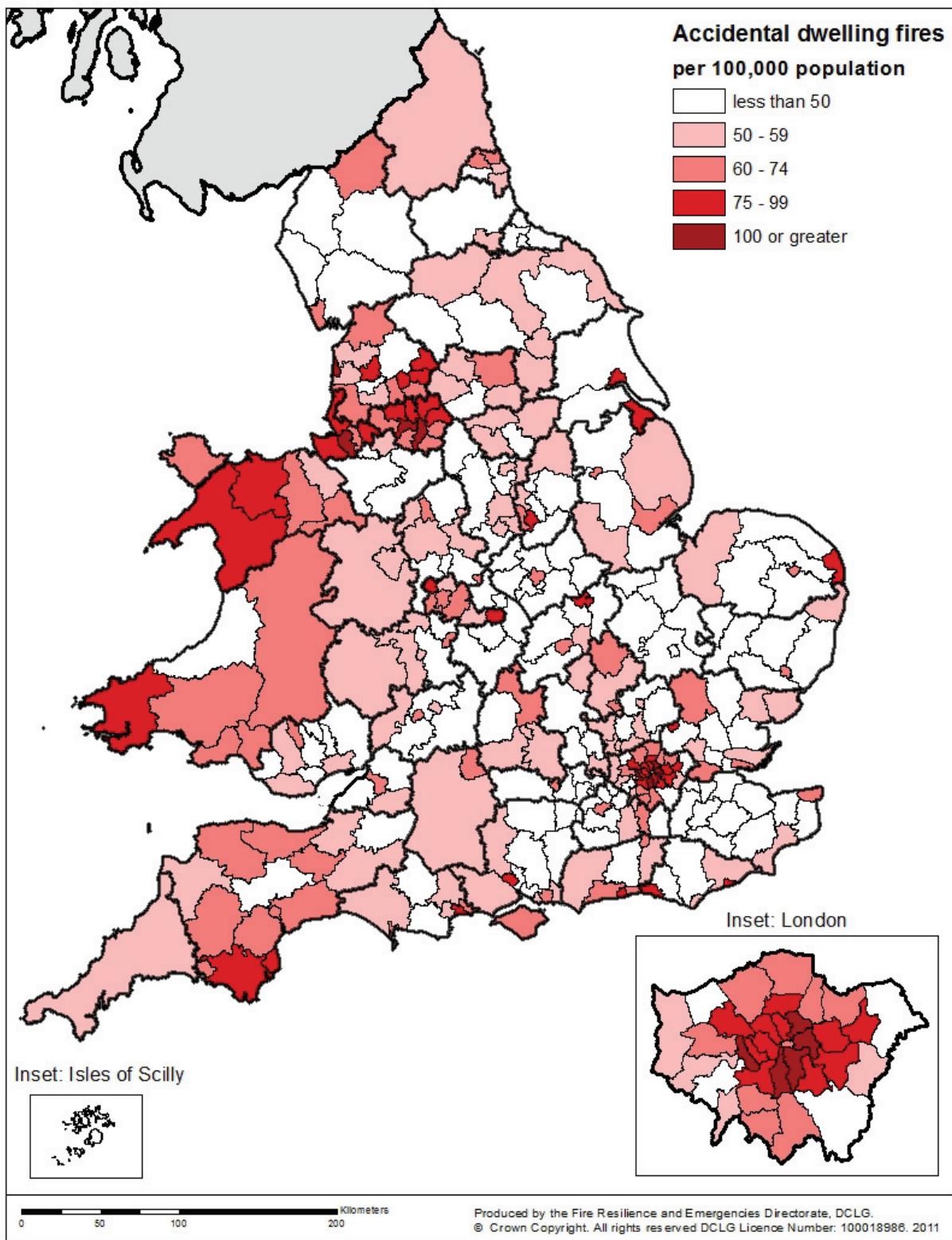
- 2.2 The majority of fires in dwellings are accidental (86% in 2010-11). The number of accidental primary fires in dwellings fell by 4% from 40,300 in 2009-10 to 38,500 in 2010-11. The 2010-11 figure is the lowest number of such fires recorded in more than three decades.

### Cause of fire (Table 2)

- 2.3 The main cause of accidental fires in dwellings remains the misuse of equipment or appliances, with 14,700 cases recorded in 2010-11 – 7% more than in 2008-09 (the lowest figure in the decade). Other changes in accidental dwelling fires since 2000-01 include:
- Chip/fat pan fires have fallen by over two thirds in ten years to 2,800.
  - Instances of playing with fire have fallen by over a half in the last decade.

### Source of ignition (Table 3)

- 2.4 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.
- 2.5 Cooking appliances were the main source of ignition in accidental dwelling fires (over half in 2010-11). These fires fell by 8% to 19,700 in 2000-01, the sixth consecutive annual fall and a total fall of around a third from the peak of 32,000 in 2000-01.
- 2.6 Other key changes from 2000-01 were:
- Fires where the source of ignition was smokers' materials (i.e. cigarettes, cigars or pipe tobacco) fell by around one third;
  - Candle fire totals are now around a third less than the 2000-01 high – 1,100 compared to 1,900.

**Map 2.1: Accidental dwelling fires per 100,000 population, 2010-11**

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

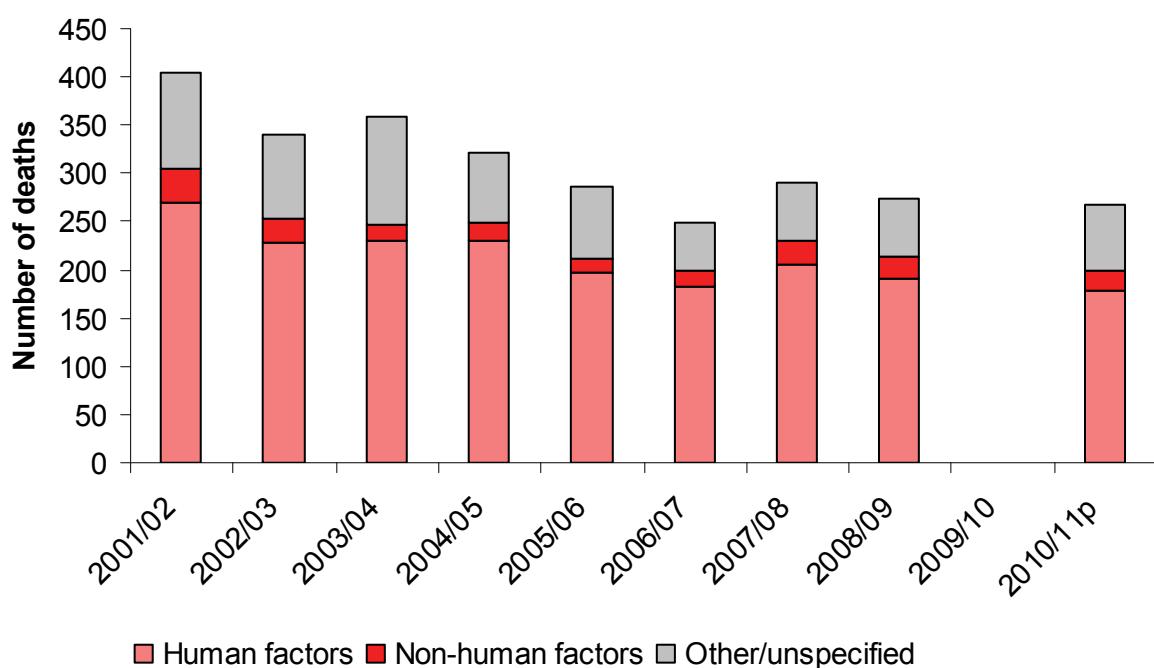
- 2.7 The majority of the deaths in dwellings result from fires caused accidentally. Of the 306 deaths in dwellings in 2010-11, 268 (88%) were of accidental causes. The number of deaths is also over a quarter less than the 2000-01 accidental total of 363.

### Deaths by cause of fire (Figure 2.1 and Table 10)

- 2.8 Once again, the leading cause of fatal accidental dwelling fires was careless handling of fire or hot substances (mostly cigarettes which accounted 96 deaths). This has now claimed over 1,200 deaths in accidental dwelling fires in Britain in the last 10 years. Although the latest figure is an increase of 4 deaths on the 2008-09 figure, there has been a general downward trend in such deaths over the last decade.

**Figure 2.1: Deaths from accidental dwelling fires by cause, 2001/02 – 2010/11<sup>p</sup>**

#### Great Britain



- 2.9 Other key changes in the number of fatal casualties by cause of fire between 2008-09 and 2010-11 were:
- Faulty appliances and leads accounted for 17 deaths, down from 23 in 2008-09;
  - Deaths due to the chip/fat pan fires fell from 14 to 9 (the 2010-11 total is less than half the 2000-01 figure).

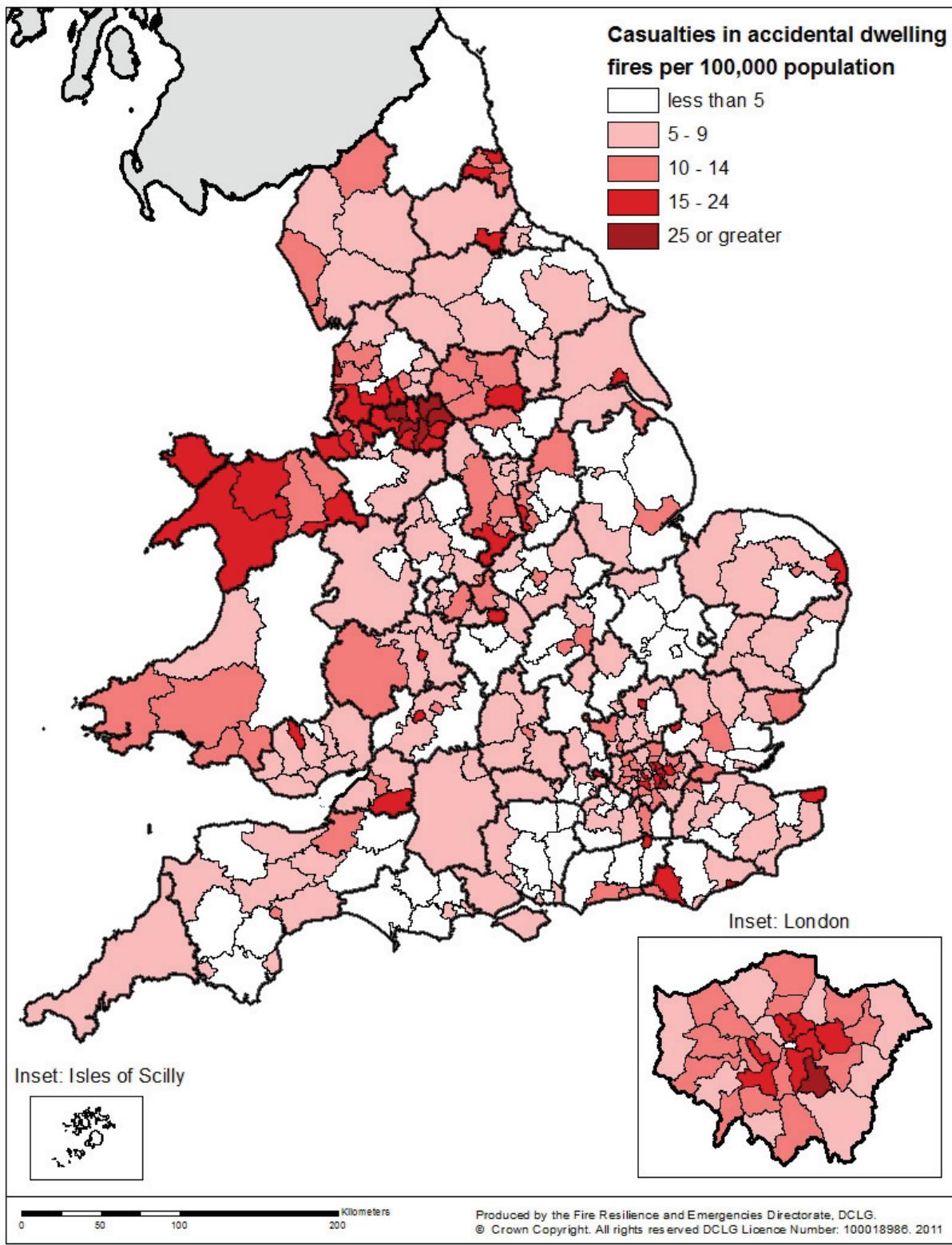
## Deaths by source of ignition of fire (Tables 2.1 and 11)

- 2.10 Smokers' materials (i.e. cigarettes, cigars or pipe tobacco) were the most frequent source of ignition causing accidental dwelling fire deaths, accounting for over a third of all accidental dwelling fire deaths in 2010-11. For every 1,000 accidental dwelling fires (where smokers' materials were the source of ignition), 35 people were killed in 2010-11. Since 2000-01, such deaths have become increasingly less common and there has been a downward trend in the figures for most of the decade.
- 2.11 Fires started by cooking appliances were responsible for around 10% of all accidental dwelling fire deaths. There were 28 such deaths in 2010-11. Only 1 person was killed for every 1,000 fires started in cooking appliances in 2010-11. 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.
- 2.12 Accidental dwelling fire deaths started by space heating appliances killed 16 people in 2010-11.
- 2.13 In 2010-11 13 people were fatally injured in accidental dwelling fires started by candles.

## Non-fatal casualties by cause of fire (Figure 2.2 and Table 10)

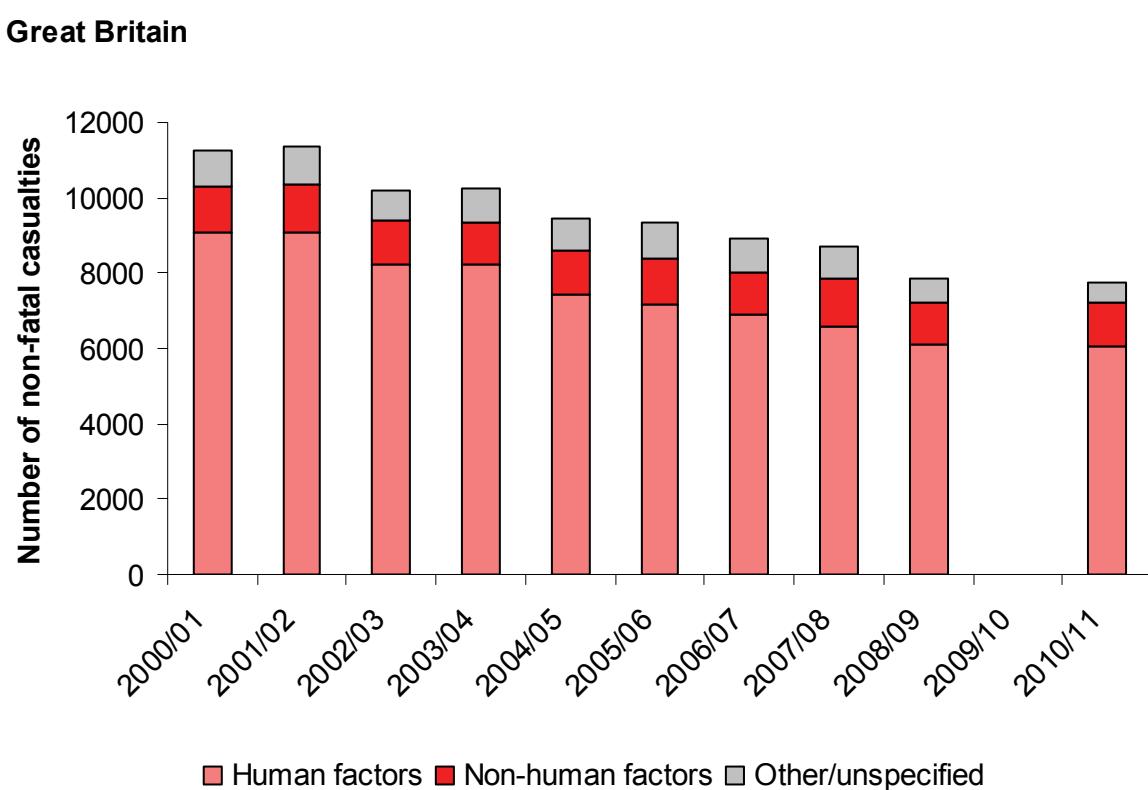
- 2.14 In 2010-11, the total number of non-fatal casualties in dwelling fires was 8,900 – 6% fewer than in 2008-09. The vast majority of these casualties occurred in fires caused accidentally (87%). The number of non-fatal casualties in *accidental* dwelling fires fell by 3% from 8,000 in 2008-09 to 7,800 in 2010-11.

Map 2.2: Casualties in accidental dwelling fires per 100,000 population, 2010-11



- 2.15 The misuse of equipment and appliances was the biggest cause of non-fatal casualties in accidental dwelling fires (2,400 in 2010-11). Up until 2004-05, chip/fat pans had been the biggest cause in accidental dwelling fires injuries.
- 2.16 Other key changes between 2008-09 and 2010-11 in the number of non-fatal casualties by cause of fire were:
- Chip pan fire related non-fatal casualties were down by 15% during the two years – now at 1,300. These fires are at their lowest level in the last decade
  - Playing with fire – non-fatal casualties rose by 2% to 124 (the first rise in over a decade)
  - Careless handling of fire or hot substances – non-fatal casualties were constant at 1,200.

**Figure 2.2: Non-fatal casualties from accidental dwelling fires by cause, 2000/01 – 2010/11**



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

- 2.17 In 2010-11, there were 4,100 injuries from accidental dwelling fires started by cooking appliances. This accounted for over half (52%) of non-fatal casualties in accidental dwelling fires and equates to 208 injuries per 1,000 fires relating to cooking appliances.

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 candles - 442 per 1,000 fires, a total of 474 injuries in 2010-11. The next highest was for fires caused by cigarette lighters – 423 per 1,000 fires, a total of 110 injuries in 2010-11.
- 2.19 Fires started by matches resulted in 79 injuries –continuing the long term downward trend (there were 225 injuries caused by matches in accidental dwelling fires in 2000-01).
- 2.20 Accidental dwelling fires caused by other electrical appliances resulted in 785 non-fatal casualties in 2010-11.

**Table 2.1: Sources of ignition for accidental dwelling<sup>1</sup> fires, with casualties, 2010/11**

	Fires		Fatal casualties		Non-fatal casualties	
	2010/11	2010/11p	Total	Per 1,000 fires	2010/11	Per 1,000 fires
			2010/11	2010/11		
<b>Total accidental</b>	<b>38,505</b>		<b>268</b>	<b>7</b>	<b>7,776</b>	<b>202</b>
Smokers' materials	2,748		96	35	838	305
Cigarette lighters	260		7	27	110	423
Matches	334		5	15	79	237
Cooking appliances	19,663		28	1	4,081	208
Space heating appliances	1,655		16	10	403	244
Central and water heating appliances	487		0	0	49	101
Blowlamps, welding and cutting equipment	195		0	0	32	164
Electrical distribution	4,006		9	2	419	105
Other electrical appliances	4,812		17	4	785	163
Candles	1,072		13	12	474	442
Other	2,216		22	10	343	155
Unspecified	1,057		55	52	163	154

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

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

- 2.21 In 2010-11, 98 (37%) accidental dwelling fire fatalities occurred in fires starting in the living or dining room. This equates to a fatality rate of 27 deaths per 1,000 fires, and makes fires starting in the living or dining room the most likely to result in a fatality. By contrast, 48 (18%) fatalities occurred in kitchen fires equating to a fatality rate of only 2 deaths per 1,000 fires, which would again suggest that many cooking-related fires are relatively minor in nature.
- 2.22 The majority of all non-fatal casualties occurred in kitchen fires (60%). As with fatalities, the non-fatal casualty rate in kitchen fires was relatively low at 198 per 1,000 fires compared to the highest rate of 344 per 1,000 fires starting in the bedroom and 298 per 1,000 fires starting in the living or dining room.
- 2.23 In 2010-11, 51% of all accidental dwelling fire fatalities occurred in the room where the fire started, down 5 percent on 2009-10. However, this proportion varies depending on the room in which the fire started. For example, 63% of fatalities from fires starting in the bedroom occurred in the room of origin, while a third of deaths in fires starting in the kitchen occurred in the room of origin.
- 2.24 The pattern for non-fatal casualties is different to that of fatalities, with 11% occurring in the room of origin in 2010-11. Once again, variations occur according to the room in which the fire started. For example, 13% of non-fatal casualties from fires starting in a bedroom occurred in the room of origin, compared to 10% for fires starting in the kitchen.

**Table 2.2: Casualties in accidental dwelling<sup>1</sup> fires by use of room where fire started, 2010/11**

	Fires		Fatal casualties		Non-fatal casualties	
	2010/11	2010/11p	Total	Per 1,000 fires	2010/11	Per 1,000 fires
			2010/11	2010/11		
<b>Total accidental</b>	<b>38,505</b>		<b>268</b>	<b>7</b>	<b>7,776</b>	<b>202</b>
Bedroom or bedsitting room	3,489		88	25	1,201	344
Living room, dining room or lounge	3,661		98	27	1,090	298
Kitchen	23,442		48	2	4,651	198
Bathroom or lavatory	853		3	4	123	144
Corridor, hall or stairs	1192		7	6	183	154
Laundry or airing cupboard	1086		6	6	146	134
Store room or loft	1,494		3	2	110	74
Other	3,152		8	3	254	81
Unspecified	136		7	51	18	132

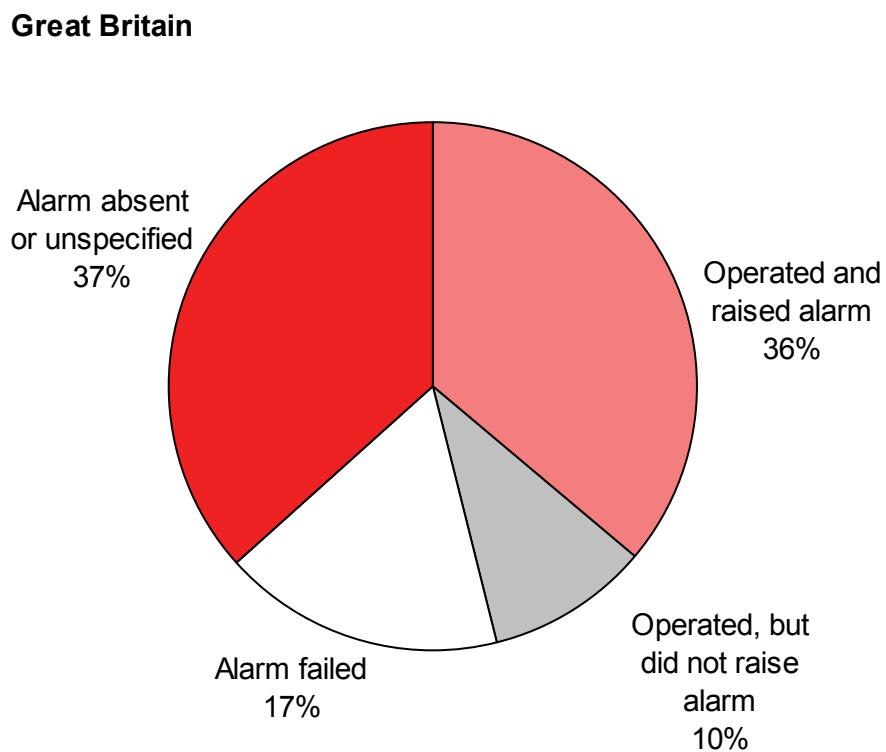
<sup>1</sup> Includes caravans, houseboats and other non-building structures used solely as a permanent dwelling (see explanatory notes).

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

### Introduction

- 2.25 This section looks at the 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 underestimate 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 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).
- 2.26 Survey research (see table 2.3) shows that the proportion of households with a smoke alarm increased rapidly from 8 per cent in 1988 to 70 per cent in 1994, but has risen more slowly in later years up to 86 per cent in 2008.

**Figure 2.3: Fires in dwellings by smoke alarm presence and operation, 2010-11**



**Table 2.3: Smoke alarm ownership, percentage of households, 1988-2008**

England and Wales (unless otherwise stated)

Year	Smoke alarm ownership		Source <sup>1</sup>
	(% of households)		
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		Source <sup>1</sup>	
(% of households)			
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>	

<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); In April 2008 the English House Condition Survey was integrated with the Survey of English Housing to form the English Housing Survey (EHS).

<sup>2</sup> England only.

<sup>3</sup> Refers specifically to ownership of a working smoke alarm.

<sup>4</sup> English Housing Survey

.. Data not available

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

2.27 No smoke alarm was present in 37% of (16,400) dwelling fires in 2010-11. These fires accounted for 112 deaths and 2,500 non-fatal casualties. Among the 63% of dwelling fires where an alarm was present:

- an alarm operated and raised the alarm in 16,200 dwelling fires (36% of all dwelling fires);
- operated but did not raise the alarm in 4,400 cases (10% of all dwelling fires);
- failed to operate in 7,800 cases (17% of all dwelling fires).

**Table 2.4 Fires and casualties from fires in dwellings<sup>1</sup> by presence and operation of smoke alarms, 2006/07-2010/11**

Great Britain	Presence and operation of smoke alarm					Number
	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	16,195	4,392	7,762	16,362	-	44,711
<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
2010/11p	78	40	76	112	-	306
<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	3,697	1115	1,561	2,545	-	8,918

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

## Type of alarm (Table 2.5)

- 2.28 In 2010-11, smoke alarms were present in the fire area in 28,300 dwelling fires. Of these fires, 43% had battery-operated alarms, while 56% had mains-powered.

<b>Table 2.5: Dwelling<sup>1</sup> fires where a smoke alarm was present by type of alarm, 2006/07-2010/11</b>					
Great Britain					
Year	2006/07	2007/08	2008/09	2009/10	2010/11
Total	29,216	28,862	28,033	-	28,349
Battery-powered	12,381	12,072	11,725	-	12,251
Mains-powered	16,672	16,503	16,165	-	15,768
Other/Unspecified	163	287	142	-	330
Percentage					
Year	2006/07	2007/08	2008/09	2009/10	2010/11
Battery-powered	42	42	41	-	43
Mains-powered	57	58	58	-	56
Other/Unspecified	1	1	1	-	1

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

## Discovery of fires (Table 2.6)

- 2.29 In 2010-11, a smoke alarm raised the alarm in 36% of reported dwelling fires. This continued the general increase since 2000 (when smoke alarms raised the alarm in only 25% of reported fires). Dwelling fires in which smoke alarms raise the alarm continue to:
- be discovered more rapidly after ignition
  - be associated with lower fatal casualty rates
  - cause less damage as they are more often confined to the item first ignited.
- 2.30 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 2010-11, nearly two-thirds (58%) of dwelling fires where a smoke alarm raised the alarm were discovered in under 5 minutes. In contrast, where a smoke alarm did not raise the alarm, just over half (50%) of all dwelling fires were discovered in under 5 minutes. Consequently, fatality rates in dwelling fires in which smoke alarms raise the alarm are lower than those in which smoke alarms are either absent or do not raise the alarm (5 per 1,000 detected fires compared to 8 per 1,000 for undetected fires in 2010-11).

**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 and percentage confined to item first ignited, 2006/07-2010/11**

Great Britain						
Year	Fires	Fatal casualties		Non-fatal casualties		% of fires discovered < 5 minutes
		Number	Number	Per 1,000 fires	Number	Per 1,000 fires
<b>Fires where an alarm was present, operated and raised the alarm</b>						
2006/07	19,322	60	3	3,965	205	63
2007/08	18,906	67	4	4,047	214	62
2008/09	17,715	67	4	3,836	217	61
2009/10	-	-	-	-	-	-
2010/11	16,195	78	5	3,697	228	58
<b>Fires where an alarm was absent or an alarm was present but failed to raise the alarm</b>						
2006/07	34,464	251	7	6,728	195	52
2007/08	31,502	286	9	6,443	205	52
2008/09	29,752	261	9	5,621	189	51
2009/10	-	-	-	-	-	-
2010/11	28,515	228	8	5,221	183	50

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

- Data not available

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

- 2.31 In those dwelling fires where a smoke alarm was present, 27% of alarms in 2010-11 failed to operate. However, this overall figure masks a wide difference in performance between battery-powered alarms and mains-powered alarms: 38% of all battery-powered smoke alarms failed compared to just 19% of mains-powered alarms in 2010-11.
- 2.32 The main reason for smoke alarms failing to activate in battery-powered alarms was missing or flat batteries. In 2010-11 they accounted for 20% of all failures in battery-powered alarms. The main reason for failure to activate by mains-powered alarms was that the fire products did not reach the detectors (42% of cases).
- 2.33 The smoke alarm operated but did not raise the alarm in 4,392 fires in 2010-11. The main reasons were that a person raised the alarm before the smoke alarm operated (56%) or there was no person within earshot of the alarm (20%).

**Table 2.7: Smoke alarm failures in dwelling<sup>1</sup> fires by type of alarm, 2006/07-2010/11**

Great Britain	Number				
Alarm presence and operation	2006/07	2007/08	2008/09	2009/10	2010/11
<b>Total<sup>2</sup></b>					
Alarm present	29,216	28,862	28,033	-	28,349
Alarm failed to activate	6,688	6,735	6,760	-	7,762
<i>Failure rate (%)</i>	23	23	24	-	27
<b>Battery-powered</b>					
Alarm present	12,381	12,072	11,725	-	12,251
Alarm failed to activate	4,423	4,321	4,198	-	4,606
<i>Failure rate (%)</i>	36	36	36	-	38
<b>Mains-powered<sup>3</sup></b>					
Alarm present	16,672	16,503	16,165	-	15,768
Alarm failed to activate	2,217	2,327	2,504	-	3,037
<i>Failure rate (%)</i>	13	14	15	-	19

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

<sup>2</sup> Total does not sum to individual sections as a small number of alarms with another or an unspecified power source have been included.

<sup>3</sup> Mains-powered alarms include those powered by mains only or by battery and mains.

**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, 2006/07-2010/11**

Great Britain		2006/07	2007/08	2008/09	2009/10	2010/11
Type of alarm and reason for failure to activate						
<b>Battery</b>						
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	-	<b>100%</b>	
Missing battery	40%	37%	32%	-	20%	
Battery failure/flat	10%	9%	10%	-	9%	
Other act preventing alarm from operating inc. turned off	5%	5%	4%	-	6%	
Fire products did not reach detector(s)	32%	36%	39%	-	42%	
Poor sitting of detector(s)	3%	4%	2%	-	9%	
Faulty system / incorrectly installed	4%	4%	4%	-	4%	
Other including not known e.g. where system too badly damaged	5%	5%	8%	-	9%	
<b>Mains</b>						
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	-	<b>100%</b>	
Missing battery	4%	5%	3%	-	1%	
Battery failure/flat	1%	0%	1%	-	1%	
Other act preventing alarm from operating inc. turned off	25%	24%	22%	-	19%	
Fire products did not reach detector(s)	49%	50%	48%	-	46%	
Poor sitting of detector(s)	2%	1%	1%	-	11%	
Faulty system / incorrectly installed	9%	9%	10%	-	9%	
Other including not known e.g. where system too badly damaged	11%	11%	15%	-	13%	

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

- Data not available.

**Table 2.9: Fires in dwellings<sup>1</sup> with a smoke alarm where alarm operated but did not raise the alarm by reason, 2006/07-2010/11**

Great Britain		Percentage				
Reason		2006/07	2007/08	2008/09	2009/10	2010/11
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	-	<b>100%</b>	
Person raised the alarm before system operated	55%	59%	55%	-	56%	
No person in earshot	21%	21%	20%	-	20%	
Poor sitting of detectors meant person raised alarm	2%	2%	1%	-	0%	
Occupants failed to respond	12%	9%	11%	-	15%	
Faulty system inc. incorrectly installed	1%	1%	1%	-	0%	
Other including not known e.g. where system too badly damaged	9%	9%	11%	-	10%	

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

- Data not available.

## Deliberate fires (Tables 2 and 24)

- 2.34 Approximately 14% of all dwelling fires in 2010-11 were deliberate or suspected to be deliberately started. The number of deliberate dwelling fires fell for the seventh consecutive year - down by 11% to 6,200 from 6,900 in 2009-10. Of the total 35,900 deliberate fires in 2010-11, only 17% were in dwellings. The majority of deliberate fires in 2010-11 (47%) involved road vehicles – 17,000 fires (see Chapter 4 for further details).
- 2.35 In total there were 72 fatalities in deliberate fires in 2010-11, less than in 2009-10). The majority of these occurred in dwelling fires, 38 in 2010-11. This accounts for 53% of the total deaths in dwelling fires.
- 2.36 There were a total of 1,700 non-fatal casualties as a result of deliberate fires in 2010-11. Two thirds of these injuries occurred in deliberate dwelling fires. Just 13% of the total number of non-fatal casualties in dwelling fires occurred in deliberate fires.

## Time of call to the fire and rescue service (Table 2.10)

- 2.37 Just over two thirds of accidental dwelling fires occurred between midday and midnight (70%). However most casualties in accidental dwelling fires occurred between 6pm and 11.59pm (33%). Deliberate dwelling fires occurred most frequently between 6pm and 11.59pm (39%); while three quarters of casualties occurred between 6pm and 5.59am (69%). In 2010-11 the fewest number of dwelling fire casualties occurred between 6am and 11.59am.

**Table 2.10: Accidental and deliberate dwelling<sup>1</sup> fires, total dwelling fire casualties<sup>2</sup> and casualties per 1,000 dwelling fires by time of day, 2010/11**

Great Britain		Percentage <sup>3</sup> /Rate <sup>4</sup>			
Time of day	Accidental dwelling fires	Deliberate dwelling fires	Accidental dwelling fire casualties	Deliberate dwelling fire casualties	Dwelling fire casualty rate <sup>3</sup>
Midnight - 5.59am	12%	30%	21%	39%	328
6am - 11.59am	18%	10%	17%	9%	199
Midday - 5.59pm	37%	21%	29%	15%	161
6pm - 11.59pm	33%	39%	33%	36%	203

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

<sup>2</sup> Fatal and non-fatal casualties.

<sup>3</sup> Component percentages may not add up to 100% due to rounding.

<sup>4</sup> Per 1,000 fires.

- 2.38 Casualty rates are significantly higher through the night – rising to 328 casualties per 1,000 fires between midnight and 5.59am. The higher casualty rates during the night probably reflect the lack of awareness of the casualties when the fire starts. It must also be borne in mind that many early morning fires may have started earlier in the night – the times used for analysis are those when the fire was first reported to the fire and rescue service.

## Chapter 3 – Other Buildings

### Introduction (Tables 1b, 2 and 6)

- 3.1 In 2010-11 there were 24,900 fires recorded in buildings other than dwellings, 6% fewer (1,650 fires) than 2009-10. This follows consecutive falls between 2003 and 2007 and follows the general downward trend since 1995. The majority of fires occurred in:
- private garages and sheds (21%) - 5,500 fires
  - retail distribution (14%) - 3,500 fires
  - restaurants, cafes, public houses etc (8%) - 2,000 fires
  - industrial premises (8%) - 2,000 fires
  - recreational and other cultural services (5%) - 1,200 fires.
- 3.2 In 2010-11, 19 people died in buildings other than dwellings – compared with 17 in 2008-09. Also in fires in other buildings, 1,200 injuries were sustained in 2010-11 (a increase of 3% compared with 2008-09). These figures represent around 5% of all fire deaths and 11% of non-fatal casualties.

### Accidental fires (Table 2)

#### Trends

- 3.3 Over half of fires in other buildings were started accidentally (65% compared to over 85% of those in dwellings). In 2010-11, a total of 18,500 accidental fires in other buildings were recorded, 9% more than in 2009-10. The general trend in such fires over the last ten years has been downward, with the 2010-11 figure nearly 19% lower than the 2000-01 figure of 23,000.

#### Cause of fire

- 3.4 As in the previous year, the main cause of accidental fires in other buildings in 2010-11 was faulty appliances and leads. These represented 24% of all such fires, a total of 4,400 fires – a smaller proportion than in 2008-09 (5,000). There was an 16% fall in the number of fires caused by misuse of equipment or appliances, down to 2,700 fires. Other key changes in the causes of accidental fire in other buildings were:
- Chip/fat pan fires - increased by 18% to 520
  - Playing with fire – increased by 27% to 94.

### Source of ignition (Table 3)

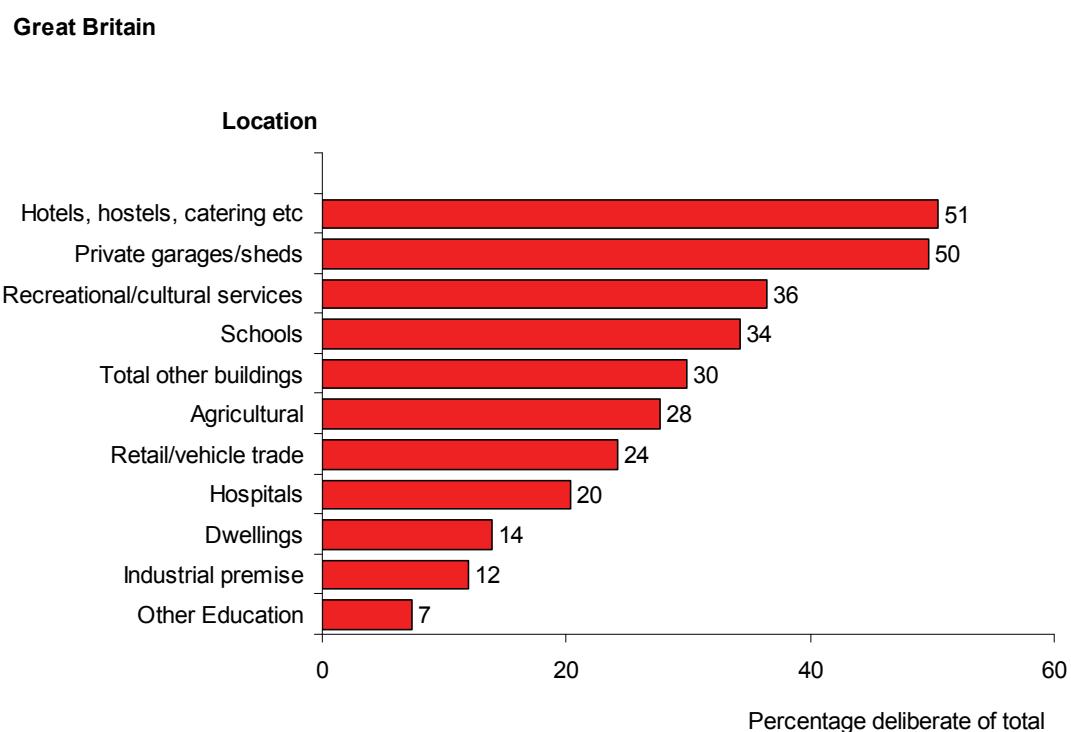
- 3.5 Around half of accidental fires in other buildings were started by either electrical appliances (3,300 fires) or by cooking appliances (3,300 fires). The number of fires started by electrical appliances was down 31% on 2008-09, while cooking appliance fires rose by 5%. Other key changes relating to source of ignition from 2008-09 were:
- Smokers' materials – increased by 16% to 1,100 since 2008-09, while fires started by matches increased by 41% to 175 over the same period;
  - Candle fires – increased by 9% to 150 fires since 2008-09;
  - Electrical distribution (leads to appliances, wires and cables) – increased by 23 % to 3,000.

### Deliberate fires (Tables 2 and 24, Figure 3.1)

#### Trends

- 3.6 The remaining 10,000 (35%) other building fires were due to deliberate ignition – a similar proportion as in 2008-09 (9,200). Over the last decade, the number of deliberate fires in other buildings has decreased by 42%, from 17,100 in 1998 (see paragraph 1.10 and table 1.2).

**Figure 3.1: Building fires: deliberate fires as a percentage of all fires in each location category, 2010/11**



## Location (Figure 3.1)

- 3.7 A comparison of the number of deliberate fires in other building locations with the total fires experienced shows that certain buildings are more prone to deliberate ignition than others. The main locations in 2010-11 were hotels, hostels and catering (51%); private garages and sheds (50% deliberate); recreational and other cultural services premises (36%); and schools (34%).

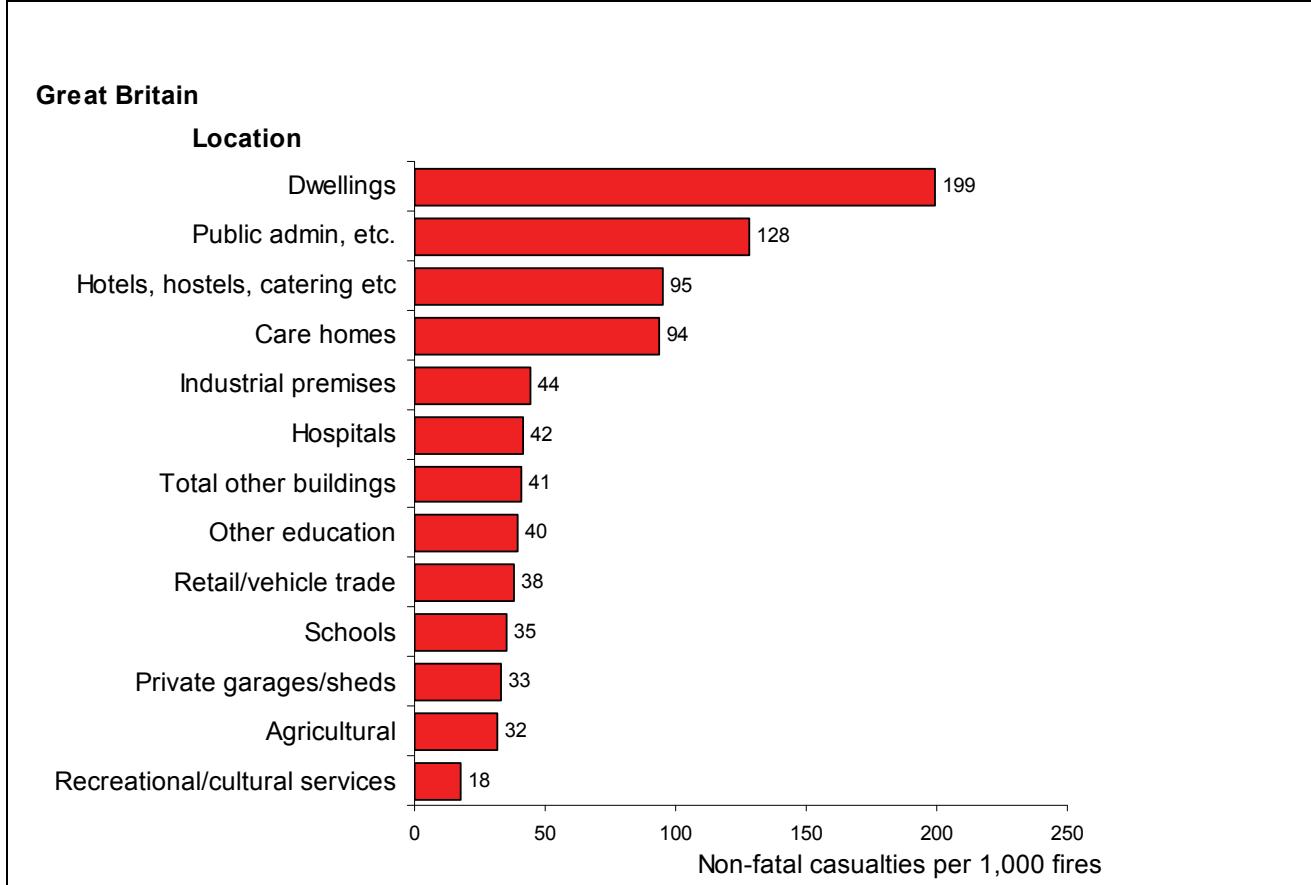
## Casualties (Table 22 and Figure 3.2)

- 3.8 Only a small number of casualties occur in other building fires (see paragraph 3.2). Casualty rates show that in 2010-11, there were fewer than 5 deaths per 1,000 other building fires (compared with 7 deaths per 1,000 dwelling fires (5 in 2007). For non-fatal casualties the rates were 43 per 1,000 fires for other buildings (up from 41 in 2007) and 204 per 1,000 fires for dwellings (207 in 2007).

## Location (Figure 3.2)

- 3.9 In 2010-11, the highest non-fatal casualty rates in fires in other buildings occurred in public administration premises – includes police stations and prisons - (128 casualties per 1,000 fires). High injury rates were also recorded in Care homes - (94 non-fatal casualties per 1,000 fires) and hotels (95 non-fatal casualties per 1,000 fires). This compares with 44 non-fatal casualties in industrial premises. The average in all other building fires was 41 non-fatal casualties per 1,000 fires.

**Figure 3.2: Building fires: Non-fatal casualty rates per 1,000 fires in each location category, 2010/11**



## Automatic fire detector analyses (Tables 3.1 to 3.3, Figure 3.3)

### Introduction

- 3.10 This section looks at the effectiveness of automatic fire detectors and the likely causes of failure on those occasions when detectors 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 detectors where no emergency call was made will not be recorded, meaning that effectiveness of automatic fire detectors may be understated. See paragraph 2.26 for further details in relation to domestic smoke alarms.

**Table 3.1: Fires and casualties from fires in other buildings by presence and operation of automatic fire detectors, 2006/07-2010/11**

Great Britain	Presence and operation of automatic fire detectors				Number
	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	8,106	1,124	2,993	12,648	24,871
<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
<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	521	75	132	496	1,224

- Data not available

**Table 3.2 Fires in other buildings with an automatic fire detector where detector did not operate by reason, 2006/07-2010/11**

Reason	2006/07	2007/08	2008/09	2009/10	2010/11
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	-	<b>100%</b>
Missing battery	2%	1%	1%	-	1%
Battery failure/flat	..	1%	..	-	..
Other act preventing alarm from operating inc. turned off	8%	8%	6%	-	22%
Fire products did not reach detector(s)	77%	75%	73%	-	44%
Poor siting of detector(s)	..	1%	1%	-	13%
Faulty system inc. incorrectly installed	4%	4%	3%	-	4%
Insufficient detectors	..	..	..	-	..
Other reason (not act or omission)	..	..	..	-	..
System apparently operational after fire	..	..	..	-	..
Other including not known e.g. where system too badly damaged	9%	10%	15%	-	14%
Unspecified	0%	0%	1%	-	1%
- Data not available.					

**Table 3.3: Fires in other buildings with an automatic fire detector where detector operated but did not raise the alarm by reason, 2006/07-2010/11**

Reason	2006/07	2007/08	2008/09	2009/10	2010/11
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	-	<b>100%</b>
Person raised the alarm before system operated	69%	66%	68%	-	70%
No person in earshot	14%	17%	14%	-	17%
Poor siting of detectors meant person raised alarm	1%	1%	0%	-	0%
Occupants failed to respond	2%	1%	2%	-	2%
Faulty system inc. incorrectly installed	3%	1%	1%	-	0%
Other including not known e.g. where system too badly damaged	11%	13%	14%	-	11%
- Data not available.					

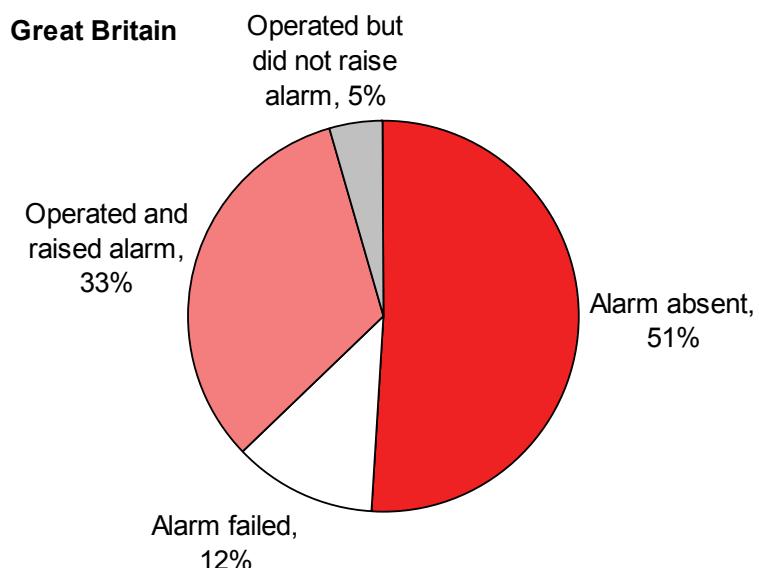
## Automatic Fire Detector presence and operation

3.11 Automatic fire detectors were absent in the area in which the fire started in 12,600 (51%) of all other building fires in 2010-11. These fires resulted in 11 deaths and a further 496 non-fatal casualties. For the remaining 49% of other building fires where an automatic fire detector was present:

- The automatic fire detector operated and raised the alarm in 8,100 cases (33%)
- operated but did not raise the alarm in 1,100 cases (5%);
- failed to operate altogether in 3,000 cases (12%).

This follows a broadly similar pattern to that for dwelling fires (36%, 10% and 17% respectively).

**Figure 3.3: Fires in other buildings by automatic fire detector presence and operation, 2010/11**



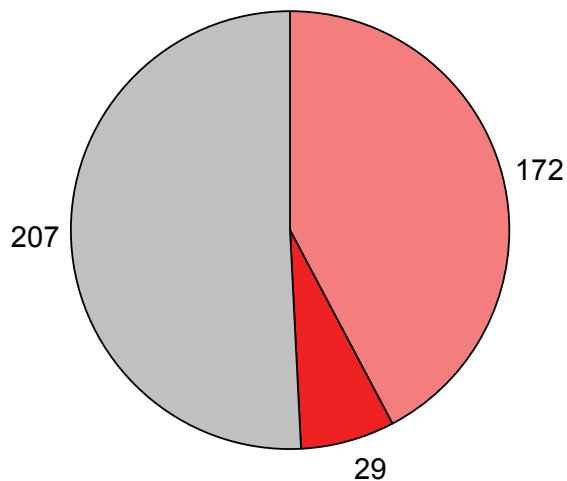
- 3.12 The number of fires in other buildings where the automatic fire detector failed to operate has fallen to around 3,000 in 2010-11 compared to 4,500 in 2008-09. The main reason why automatic fire detectors failed to operate was due to fire products not reaching the detectors - 44 percent of such cases.
- 3.13 The number of fires in other buildings where the automatic fire detector operated, but did not raise the alarm was 1,100 (1,000 in 2008-09). The main reasons in 2010-11 were that a person raised the alarm before the detector operated (70%) or there was no-one within earshot of the alarm (17%) – up slightly from 2008-09 (14%).

## Sprinklers (Figures 3.4 and 3.5)

- 3.14 In 2010-11 there were 408 fires with the outcome where sprinklers were present in the room of origin. 43 fires were in dwellings and 365 fires were in other buildings. Of these 172 (42%) were extinguished/contained/controlled, 29 (7%) did not contain/control the fire, and 207 (51%) were not known.

**Figure 3.4: Outcomes for fires where sprinklers were present (in room of origin) 2010-11**

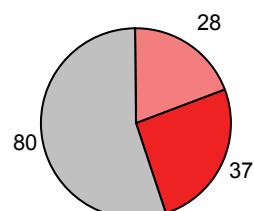
Great Britain



- 3.15 In 2010-11 there were 145 fires with the outcome where sprinklers were present on the same floor. 5 fires were in dwellings and 140 were in other buildings. Of these 28 (19%) were extinguished/contained/controlled, 37 (26%) did not contain/control the fire, and 80 (55%) were not known.

**Figure 3.5: Outcomes for fires where sprinklers were present (on same floor) 2010-11**

Great Britain



## Chapter 4 – Road Vehicle Fires

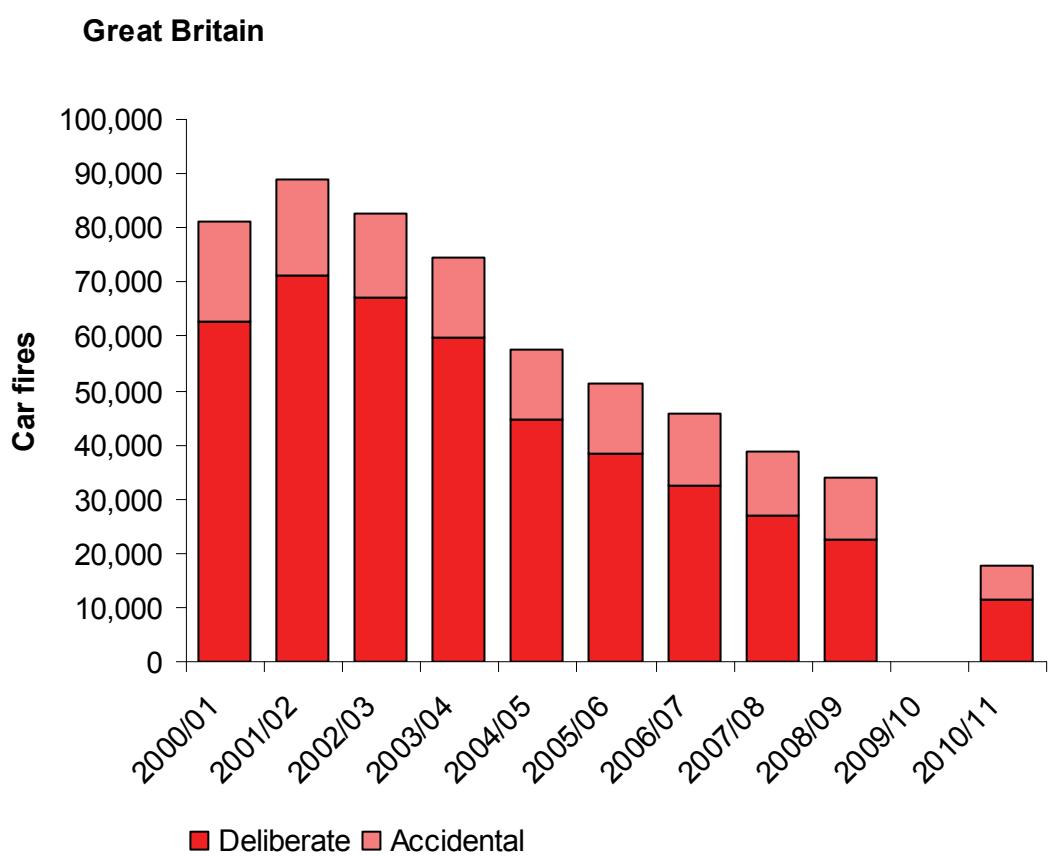
### Introduction (Table 16)

- 4.1 Road vehicle fires totalled 32,500 in 2010-11, of which 17,900 (55%) were in cars, 3,100 (10%) were in vans and 1,400 (4%) were in lorries. The total number of fires recorded in road vehicles decreased by 16% compared with 2009-10. The 2010-11 total represented the lowest in the decade.

### Car fires by cause of fire (Table 15 and Figures 4.1)

- 4.2 In 2010-11, the total number of car fires totalled 17,900. Deliberate fires now account for 65% of all car fires, this compares with 80% a decade earlier. The latest figure (11,600 deliberate car fires) shows a fall since the peak of 60,200 in 2001-02.

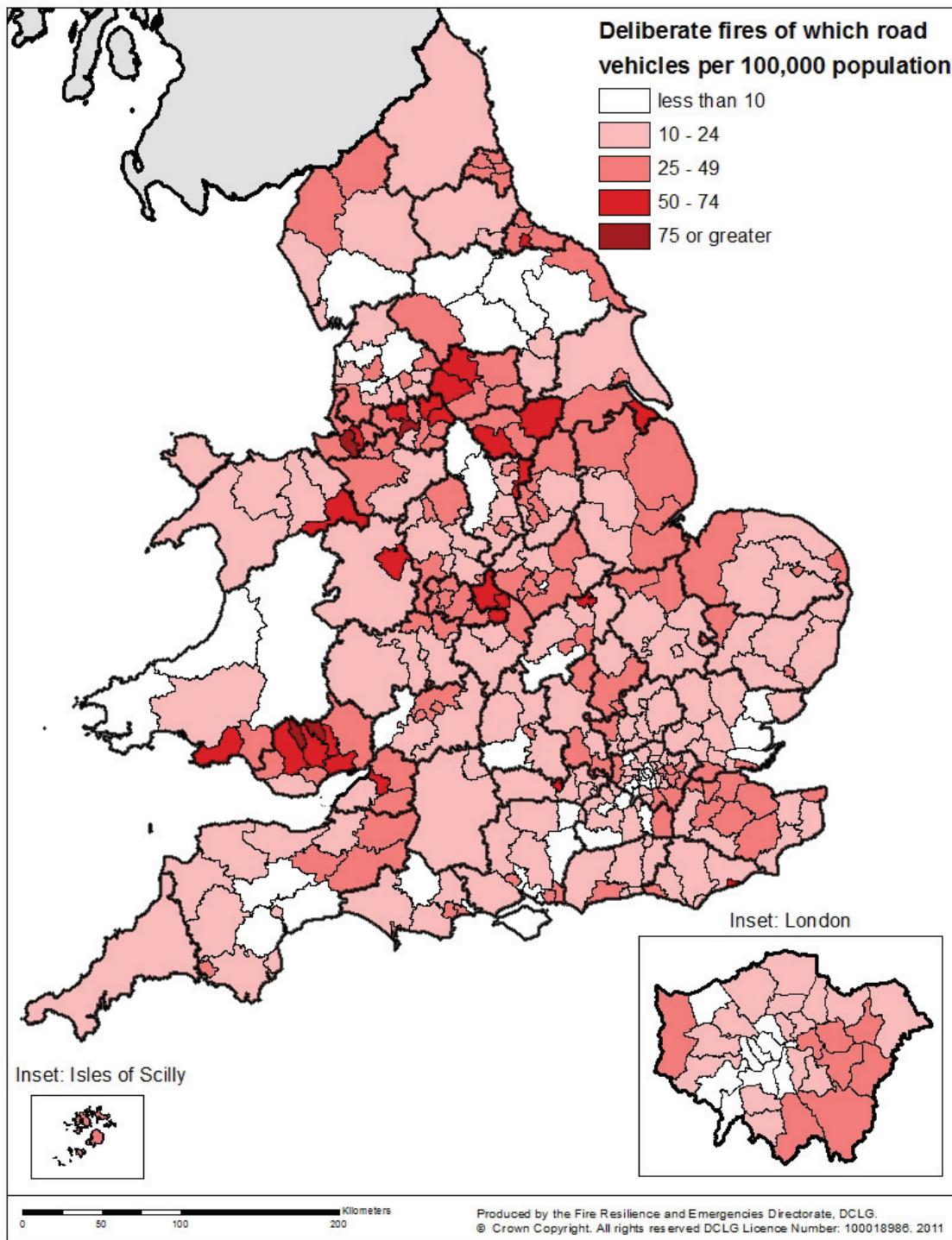
**Figure 4.1: Fires in cars by cause, 2000/01-2010/11**



- 4.3 The fall in deliberate car fires can be attributed to a number of factors. Higher scrap metal prices in recent years has raised the value of end of life vehicles making them less likely to be abandoned.

- 4.4 Accidental car fires fell to 6,300 in 2010-11, continuing the general decline, and were less than 10% of those recorded in 2000-01.

**Map 4.1: Deliberate fires of which road vehicles per 100,000 population, 2010-11**



## Casualties (Table 6)

- 4.5 There were 72 fatalities in road vehicle fires in 2000-01 compared with 44 in 2010-11. This equates to less than 2 deaths per 1,000 fires and contrasts with a fatality rate for dwellings of 7 deaths per 1,000 fires.
- 4.6 The number of non-fatal casualties in road vehicle fires fell to 520 in 2010-11 from 647 in 2009-10, but is much lower than the levels recorded in the mid-1990s (837 in 1996). These latest figures equate to 13 non-fatal casualties per 1,000 fires, compared with 200 in dwellings and 50 in other buildings.

## Time of call to fire and rescue service (Table 4.1)

- 4.7 The time that the fire and rescue service was called to road vehicle fires varied according to the cause of the fire. 87% of deliberate road vehicle fires are started between 6pm and 5.59am. In contrast just 40% of accidental fires in road vehicles are started between these times. Casualty rates drop from 30 casualties per 1,000 road vehicle fires during daytime (6am to 5.59pm) to 46 casualties per 1,000 fires in the late evening and through the night.

**Table 4.1: Accidental and deliberate road vehicle fires, total road vehicle fire casualties<sup>1</sup> and casualties per 1,000 road vehicle fires by time of day, 2010/11**

Great Britain		Percentage/Rate <sup>2</sup>		
Time of day	Accidental fires	Deliberate fires	Casualties	Casualty rate
Midnight - 5.59am	13%	47%	19%	11
6am - 11.59am	24%	6%	23%	27
Midday - 5.59pm	36%	7%	26%	22
6pm - 11.59pm	27%	40%	32%	16

<sup>1</sup> Fatal and non-fatal casualties.

<sup>2</sup> Rate per 1,000

## Chapter 5 – Outdoor Fires

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

- 5.1 Primary and secondary outdoor fires totalled 207,000 in 2010-11. Of which 87,000 (42%) were refuse fires (including bonfires, refuse containers), 60,000 (29%) were grassland and heathland fires, 32,500 (16%) were road vehicle fires and 28,000 (13%) were other outdoor structures (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 few casualties occur in outdoor fires, other than road vehicle fires. In 2010-11 there were 19 fire related deaths, and 472 non-fatal casualties in outdoor fires (excluding road vehicle fires), amounting to around 0.1 deaths and fewer than 3 non-fatal casualties per 1,000 outdoor fires.

**Table 5.1: Primary and secondary outdoor fires by location, 2000/01-2010/11**

Great Britain		Fires (thousands) <sup>1</sup>			
Year	Total	Road vehicles	Grassland, etc (inc. intentional straw and stubble burning)	Refuse	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 <sup>1</sup>	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	148.0	40.5
2005/06	309.8	61.5	67.3	142.9	38.0
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	202.0	42.4	34.9	101.0	23.8
2009/10	-	-	-	-	-
2010/11	207.0	32.5	61.3	86.9	26.3

<sup>1</sup> Figures are rounded and the components do not necessarily sum to the independently rounded totals.  
- Data not available.

- 5.3 The number of grassland and heathland fires is dependent on persisting weather conditions. In 2010-11, there were 58,400 such fires recorded. This was more than in 2008-09 (35,000) and less than in 2006-07 (84,000).
- 5.4 Refuse fires decreased in 2010-11 to 86,900 – a fall by 14% from 2008-09 and the lowest level over the decade. This coincides with the introduction of the electronic Incident Recording System and may be due to changes in incidents being classified. There were 32,500 road vehicle fires in 2010-11 an decrease of 23% from 2008-09 which itself had been the lowest level for more than a decade.

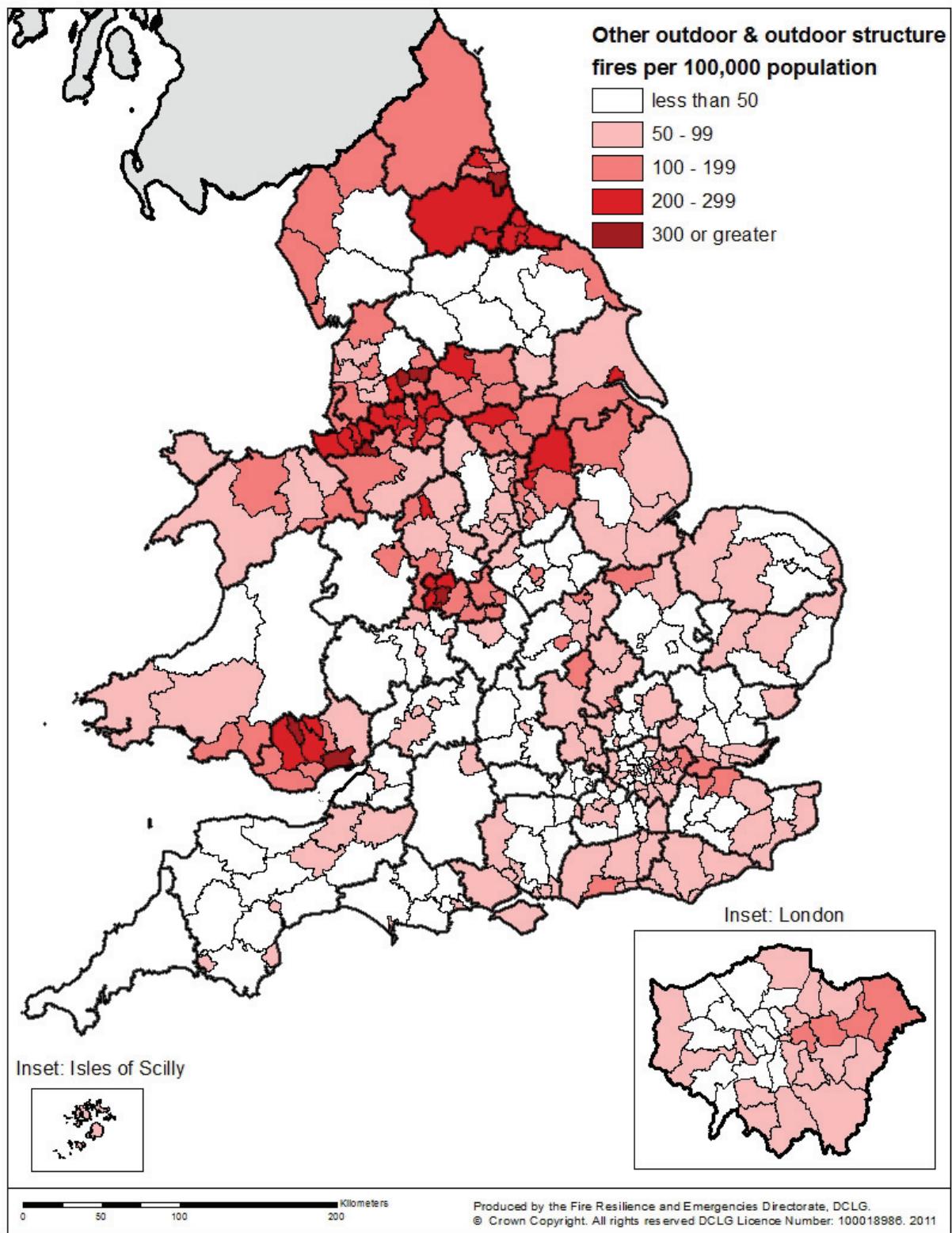
## When fires occur (Table 5.2)

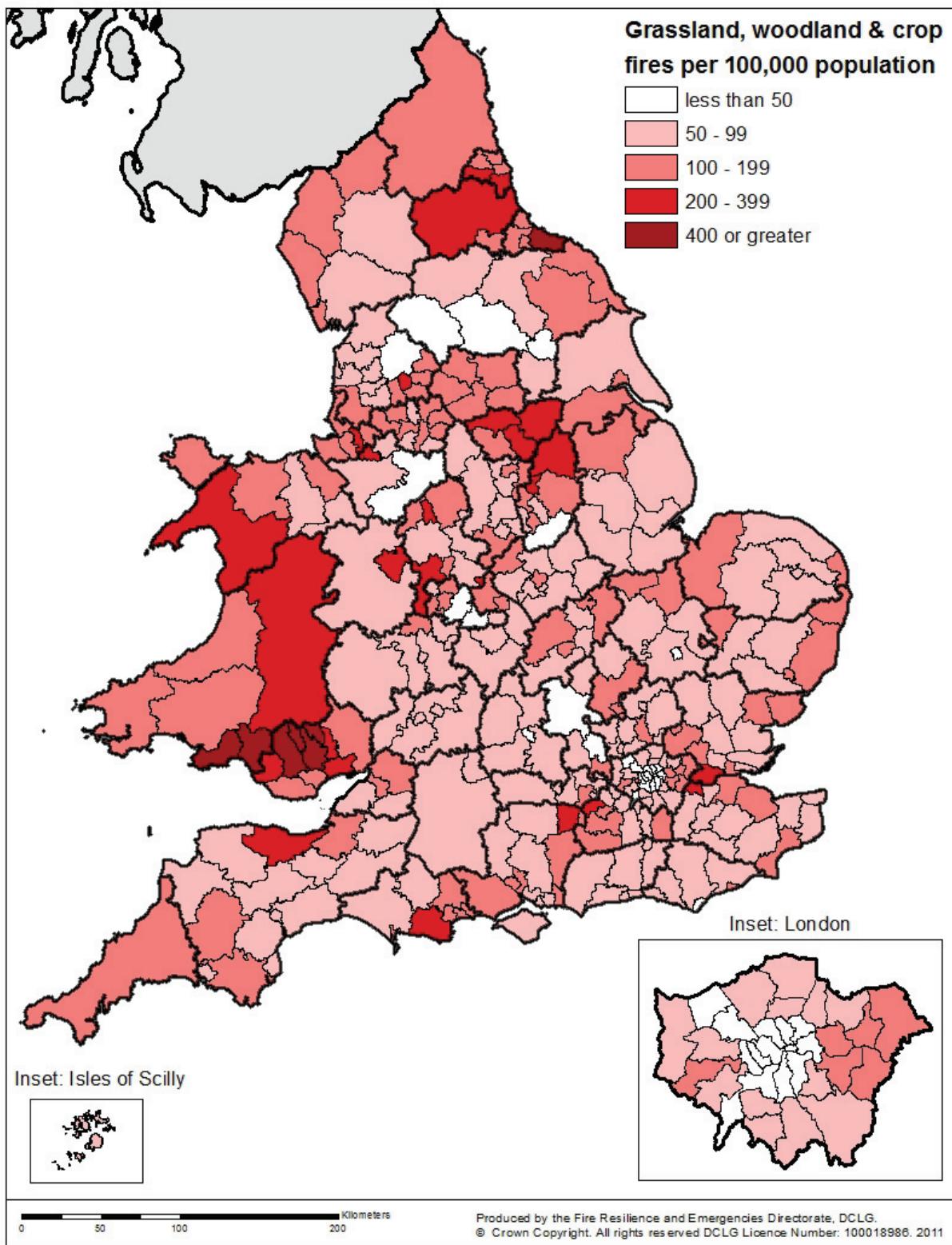
- 5.5 Outdoor fires exhibit the strong seasonal patterns mainly due to the effect of the weather on grassland fires. There was an average of 452 grassland fires per day in April 210 compared with just 99 fires per day in September 2010. Between April and September there were 1,500 grassland fires compared with just 350 in the following six months. This coincides with the prevailing warm, sunny Spring with below average rainfall before the wetter, duller days at average or below average temperatures later. Fires in dwellings showed a different, less distinct seasonal variation, with generally higher numbers of fires per day occurring in the winter months.

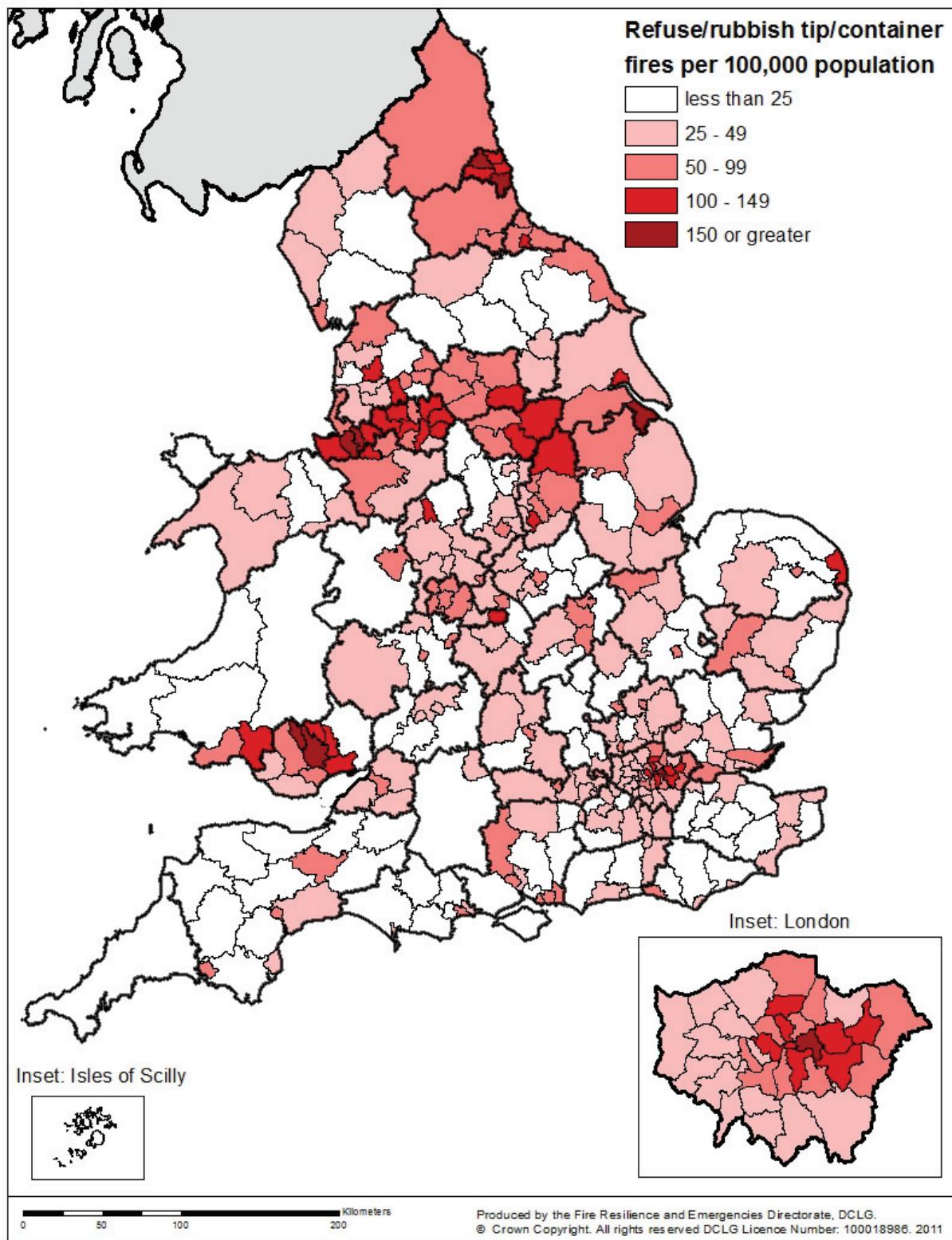
**Table 5.2: Daily rates of fires by month and location, 2010/11**

Great Britain										Fires per day
Total fires	Buildings			Outdoor Fires				Chimney fires		
	Dwellings	Other	Road vehicles <sup>1</sup>	Grassland <sup>2</sup>	Refuse	Other Outdoor				
<b>2010/11</b>	785	125	76	89	159	240	68	27		27
Apr	1,229	128	87	96	452	324	110	31		31
May	1,042	132	91	94	297	310	98	21		21
Jun	1,003	124	91	100	283	295	106	4		4
Jul	997	117	85	97	284	280	108	3		3
Aug	965	117	76	94	141	249	67	4		4
Sep	764	115	73	89	99	229	58	11		11
Oct	653	126	74	87	57	286	57	20		20
Nov	721	133	76	85	35	280	60	34		34
Dec	681	147	66	81	11	110	24	59		59
Jan	495	125	63	87	22	154	29	55		55
Feb	586	122	62	78	29	138	34	45		45
Mar	468	116	73	80	194	257	62	40		40

<sup>1</sup> Includes derelict vehicles.  
<sup>2</sup> Includes intentional straw and stubble burning.

**Map 5.1: Other outdoor and outdoor structure fires per 100,000 population, 2010-11**

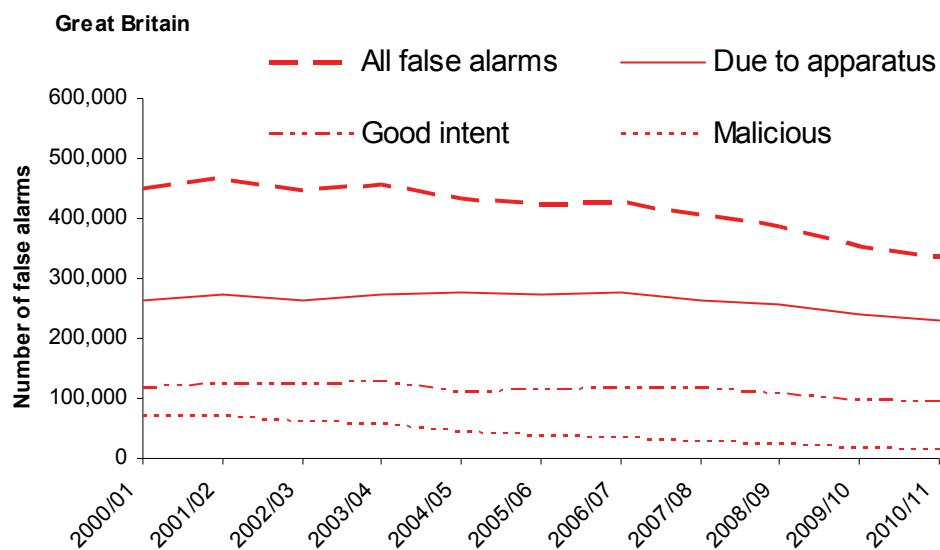
**Map 5.2: Grassland, woodland and crop fires per 100,000 population, 2010-11**

**Map 5.3: Refuse/rubbish tip/container fires per 100,000 population, 2010-11**

## Chapter 6 – False Alarms

- 6.1 There were 337,300 false fire alarms attended in 2010-11, a decrease of 5% (17,000 incidents) from 2009-10 and third lower than the peak level of 507,000 in 1995. Within this category, good intent false alarms fell by around 4% to 93,100, while false alarms due to apparatus decreased by 5% to 230,000. There was also a large decrease in malicious false alarms (a reduction of 13% to 14,200). This continues the long term downward trend and is a fall of 80% since 2000-01.
- 6.2 False alarms due to apparatus represented over two thirds of the total number of false alarms in 2010-11, compared to just over a half in 1998.

**Figure 6.1: Fire false alarms, 2000/01 – 2010/11**

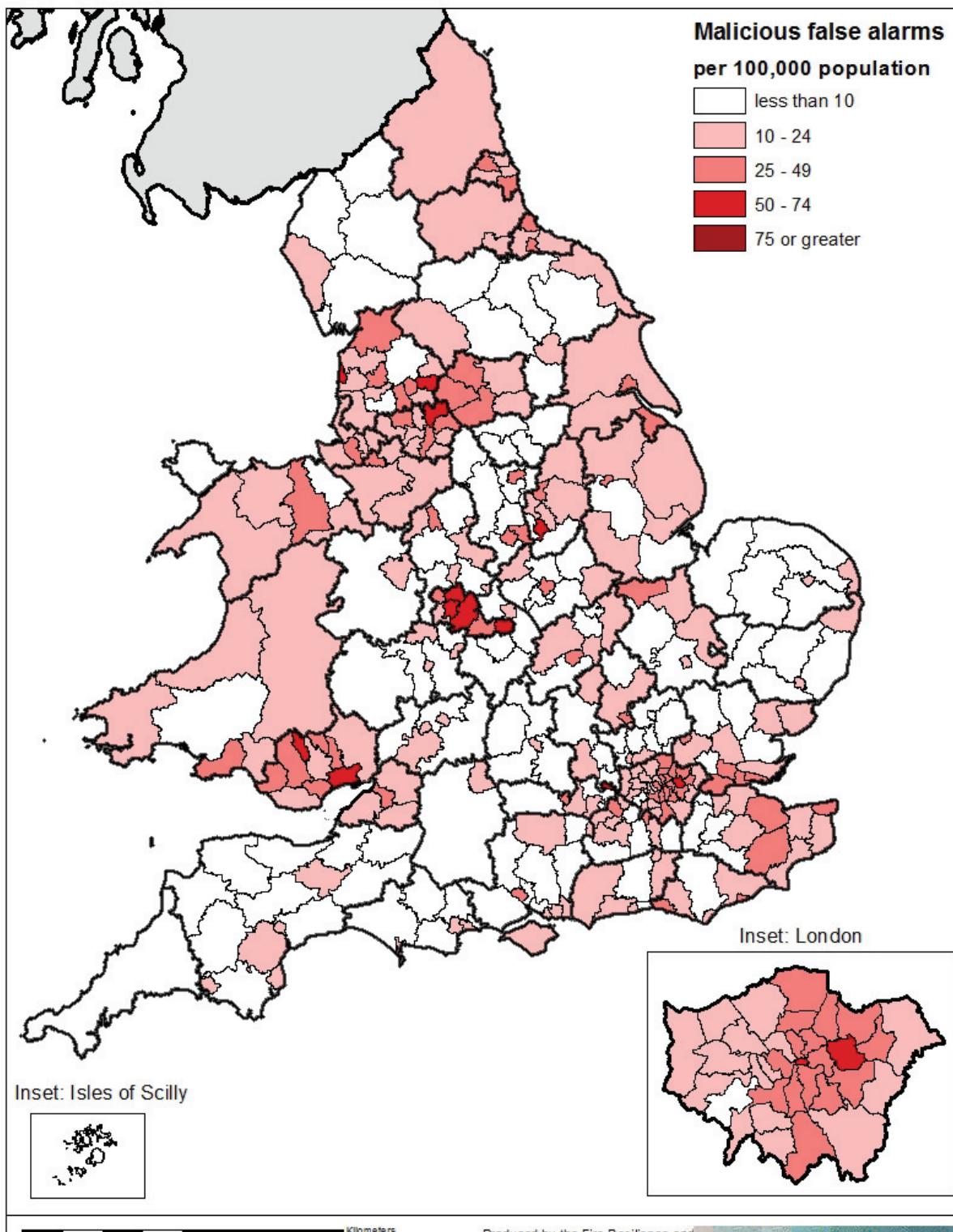


- 6.3 In 2010-11, over half of all fire-related incidents attended (i.e. all fires plus false alarms) were false alarms. Malicious false alarms accounted for just 2% of all fire-related incidents, whereas false alarms due to apparatus accounted for just over a third of all fire-related incidents.

**Table 6.1: False alarms, 2000/01-2010/11**

Great Britain		Number (thousands)		
Year	Malicious	Good intent	Due to apparatus	Total
2000/01	69.4	117.3	263.4	450.2
2001/02	70.5	123.0	273.7	467.2
2002/03	60.8	122.2	263.6	446.5
2003/04	55.5	126.4	274.4	456.3
2004/05	44.0	110.2	278.3	432.5
2005/06	36.0	112.0	274.7	422.7
2006/07	32.2	116.5	277.7	426.4
2007/08	27.7	115.4	262.4	405.5
2008/09	22.3	106.0	256.7	385.0
2009/10	16.3	96.6	241.4	354.3
2010/11	14.2	93.1	230.0	337.3

- 6.4 The number of false alarms in England fell by 5% in 2010-11 compared with 2009-10, while the number of false alarms in Wales remained constant during the same period. The number of false alarms in Scotland fell by 6% in 2010-11 compared with 2009-10. The highest percentage decrease in the number of false alarms between 2009-10 and 2010-11 was in Warwickshire (23%) and Derbyshire (14%). In contrast, Buckinghamshire, Dorset and Oxfordshire recorded an increase of around 7% in the number of false alarms between 2009-10 and 2010-11.

**Map 6.1: Malicious false alarms per 100,000 population, 2010-11**

## Chapter 7 – Non-fire incidents - NEW

### Introduction (Table 7.1)

7.1 In 2010-11, Fire and Rescue Services in Britain attended a total of 154,200 non-fire incidents. Attendances at road traffic incidents accounted for just under a quarter (23 per cent) of non-fire incidents.

<b>Table 7.1: Non-fire incidents, with casualties, 2010-11</b>			
Great Britain			
	Fires	Fatal casualties	Non-fatal casualties
<b>Total</b>	<b>154,220</b>	<b>1,956</b>	<b>33,951</b>
RTC	35,126	871	23,272
Other Transport incident	1,472	35	239
Flooding	20,148	3	69
Rescue or evacuation from water	936	103	234
Other rescue/release of persons	6,190	95	1,566
Animal assistance incidents	6,139	0	31
Hazardous Materials incident	2,064	18	453
Spills and Leaks (not RTC)	6,502	6	201
Making Safe (not RTC)	4,073	33	136
Lift Release	17,587	2	152
Effecting entry/exit	17,024	60	540
Removal of objects from people	4,195	2	410
Suicide/attempts	1,369	199	121
Medical Incident - Co-responder/ First responder	12,758	255	4,671
Evacuation (no fire)	894	10	168
Water provision	146	0	1
Assist other agencies	5,633	233	1,459
Advice Only	2,284	4	45
Stand By	1,038	2	11
No action (not false alarm)	8,642	25	172

## Deaths

7.2 In 2010-11 there were 1,956 non-fire incident deaths in Britain. The most common identified cause of death from a non-fire incident is by a road traffic collision. In 2010-11, Fire and Rescue Services reported that 871 people died this way, accounting for 45 per cent of all non-fire incident deaths.

## Non fatal casualties

7.3 In 2010-11 there were 34,000 non-fatal casualties for non-fire incidents in Britain. In 2010-11, there were 23,300 recorded non-fatal casualties at road traffic collisions attended by Fire and Rescue Services. These accounted for 69 per cent of all non-fire incident casualties.

**Table 7.2: Non-fire incidents, with casualties, 2010-11**

	Fires	Fatal casualties	Non-fatal casualties
<b>Total</b>	<b>134,288</b>	<b>1,565</b>	<b>28,217</b>
RTC	29,961	697	19,404
Other Transport incident	1,255	32	197
Flooding	16,762	3	62
Rescue or evacuation from water	693	75	172
Other rescue/release of persons	5,128	83	1,337
Animal assistance incidents	5,413	0	26
Hazardous Materials incident	1,747	16	390
Spills and Leaks (not RTC)	5,689	5	188
Making Safe (not RTC)	3,314	30	114
Lift Release	16,554	2	136
Effecting entry/exit	15,687	51	479
Removal of objects from people	3,826	2	366
Suicide/attempts	1,165	160	102
Medical Incident - Co-responder/ First responder	11,262	190	3,740
Evacuation (no fire)	777	10	143
Water provision	119	0	1
Assist other agencies	4,640	185	1,168
Advice Only	1,862	4	35
Stand By	695	1	9
No action (not false alarm)	7,739	19	148

## Definitions

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

<b>Primary fires- no specific definition prior to 1994</b>	<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 methods of transport (not derelict)</li> <li>iv) Outdoor storage, plant and machinery</li> <li>v) Agricultural and forestry premises and property</li> <li>vi) Other outdoor structures including post boxes, tunnels, bridges, etc.</li> </ul>
<b>Secondary fires</b>	<p>These are reportable fires that:</p> <ul style="list-style-type: none"> <li>• were not in primary fire locations (before 1994 defined as a list of locations)</li> <li>• were not chimney fires in buildings</li> <li>• did not involve casualties or rescues</li> <li>• were attended by four or fewer appliances. An appliance is counted if either the appliance, equipment from it or personnel riding on it, were used to fight the fire.</li> </ul> <p>They are reported in less detail than other fires and consequently less information concerning them is available.</p>
<b>Chimney fires</b>	<p>These are reportable fires in occupied buildings:</p> <ul style="list-style-type: none"> <li>• where fire was confined within the</li> </ul>

	<p>chimney structure</p> <ul style="list-style-type: none"> <li>• that did not involve casualties or rescues</li> <li>• attended by four or fewer appliances.</li> </ul>
<b>False Alarm</b>	<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 find 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 firefighting equipment operating (including accidental initiation of alarm apparatus by person).</p>
<b>Location</b>	The type of premises, property or countryside in which the fire <b>started</b> . This is not necessarily the type of premises in which most casualties or damage occurred as a result of the fire.
<b>Buildings</b>	All buildings including those under construction, but excluding derelict buildings or those under demolition. Prior to 1994 'buildings' were referred to as 'occupied buildings'.
<b>Dwelling</b>	Buildings occupied by households, excluding hotels, hostels and residential institutions. From 1988, mobile homes have been specifically included in the dwelling count. In 2000, the definition of a dwelling (for the purposes of reporting of fires) was widened to include any non-permanent structures used <b>solely</b> 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.).
<b>A reportable fire</b> <i>- no specific definition prior to 1994</i>	A reportable fire is an event of uncontrolled burning involving flames, heat or smoke and which the fire and rescue service attended.
<b>Late fire call</b> <i>- no specific definition prior to 1994</i>	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.
<b>Source of ignition</b>	The source of the flame, spark or heat that started the fire.
<b>Spread of fire</b>	The extent to which fire damage (as opposed to heat, smoke or other damage) spread, for example, beyond the room of origin.
<b>Heat or smoke Damage only Incidents- no specific definition prior to 1994</b>	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.
<b>Fatal Casualty</b>	A person whose death is attributed to a fire is counted as a fatality even if death occurred weeks or months later.
<b>Non-fatal casualty</b>	Non-fatal casualties consist of persons requiring medical treatment beyond first aid given at the scene of the fire, and those sent to hospital or advised to see a doctor for a check-up or observation (whether or not they actually do). People sent to hospital or advised to see a doctor as a precaution, having no obvious injury, are recorded as "precautionary check-ups".

<b>Cause of fire</b>	The defect, act or omission leading to ignition of the fire.
<b>Deliberate</b>	Includes fires where deliberate ignition is merely suspected.
<b>Accidental</b>	Includes fires where the cause was not known or unspecified

Details of all the information recorded by Fire and Rescue Services about incidents attended, and from which the statistics in this publication are derived, can be found at:  
<http://www.communities.gov.uk/publications/fire/incidentrecordingquestions>.

## Explanatory 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.

## Maps and data for areas below Fire and Rescue Service level

- 4 The maps contained in this publication are for England and Wales only at the request of the Scottish Government, since at the time of this publication, local authority level information for Scotland had not been published.
- 5 For England and Wales 106 out of 247,589 fire incidents, 193 out of 288,559 false alarms and 4 out of 10,181 casualties were not included in the maps due to incorrect grid references supplied.

## Industrial action

- 6 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

- 7 “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.
- 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).

## Fatalities

- 10 A person whose death is attributed to a fire is counted as a fatality even if the death occurred weeks or months later.

## Survey of English Housing

- 11 The Survey of English Housing (SEH) was a large continuous survey carried out primarily to collect information on households in England, their housing and other related issues. It has been superseded by the English Housing Survey. In 2004/05 the Survey of English Housing also asked a set of questions about fire-related issues in the home. 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

- 12 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

- 13 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

- 14 It is intended that data for 2010-11 will no longer be subject to revision once we publish the 2011-12 edition of this publication.
- 15 The Scottish Government has advised that Highlands and Islands Fire and Rescue Service is investigating discrepancy between their management information system and Incident Recording System. At the time of this publication, this investigation has not been completed but initial findings suggest that there maybe an over count in primary fires and an undercount in secondary and chimney fires due to transfer of data between the two systems.

## Symbols

16 Symbols used in the tables are:

- Nil or less than half the final digit shown.
- .. Not available/Not applicable.
- p Provisional figures
- pmp Per million population

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