Home Office

Response times to fires attended by fire and rescue services: England, April 2016 to March 2017

Statistical Bulletin 03/18

25 January 2018

Further information

This release contains statistics about incidents attended by fire and rescue services (FRSs) in England. The statistics are sourced from the Home Office's online Incident Recording System (IRS), which allows FRSs to complete an incident form for every incident attended, be it a fire, a false alarm or a non-fire (also known as a Special Service) incident. The online IRS was introduced in April 2009. Previously, paper forms were submitted by FRSs and an element of sampling was involved in the data compilation process.

Fire and Rescue Incident Statistics and other Home Office statistical releases are available from the Statistics at Home Office pages on the GOV.UK website. The dates of forthcoming fire and rescue and other Home Office publications are pre-announced and can be found via the Statistics: release calendar. For further information about the statistics in this publication, email firestatistics@homeoffice.gsi.gov.uk.

Data tables linked to this release and all other fire statistics releases can be found on the Home Office's 'Fire statistics data tables' page. The sections below state the most relevant tables for each section. The tables can be found here:
https://www.gov.uk/government/statistical-data-sets/fire-statistics-data-tables

Guidance for using these statistics and other fire statistics outputs is available on the fire statistics collection page, found here:
https://www.gov.uk/government/collections/fire-statistics

The information published in this release is kept under review, taking into account the needs of users and burdens on suppliers and producers, in line with the Code of Practice for Official Statistics. If you have any comments, suggestions or enquiries, please contact the team via email using firestatistics@homeoffice.gsi.gov.uk or via the user feedback form on the fire statistics collection page.

Media enquiries via Home Office news desk:

Office hours: 020 7035 3535; 7am-8pm Monday-Friday

Out of hours: 07659 174240

Statistical or public enquiries:

The responsible statistician for this publication is Deborah Lader.

To contact the Fire Statistics team:

Email: FireStatistics@homeoffice.gsi.gov.uk

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Contents

1 Key facts

This release presents statistics on fire incident response times between April 2016 and March 2017, focussing on trends in average (mean) response times in England. The results show:

- Overall, response times to fires have increased gradually over the past 20 years. However, between 2015/16 and 2016/17, response times to all types of fires either decreased or remained the same, with the exception of 'other building' fires.
- The average response time to **primary fires** (more serious fires that harm people or cause damage to property[1]) in England in 2016/17 was 8 minutes and 44 seconds: a decrease of 3 seconds since 2015/16 but an increase of 33 seconds since 2011/12.
- Two types of primary fires showed a decrease in average response times in 2016/17 (**road vehicle fires** by 11 seconds and '**other outdoor**'[2] fires by 18 seconds), **dwelling fires** were unchanged and '**other building**' fires increased by 1 second compared with 2015/16.
- Average response time to **secondary fires** in 2016/17 (which can broadly be thought of as smaller outdoor fires, not involving people or property[3]) decreased by 5 seconds to 9 minutes 8 seconds compared with 2015/16 but increased by 32 seconds compared with 2011/12.
- Fire and rescue authorities (FRAs) in **predominantly urban areas** had an average response time of 7 minutes 43 seconds in 2016/17: a decrease of 2 seconds compared with 2015/16 but an increase of 27 seconds since 2011/12.
- Average response times in **predominantly rural areas** was 10 minutes 37 seconds: a decrease of 8 seconds since 2015/16 but an increase of 31 seconds since 2011/12.
- Response times in **significantly rural FRAs** was 9 minutes and 50 seconds in 2016/17: an increase of 5 seconds and 56 seconds since 2015/16 and 2011/12, respectively.
- The average response time to **dwelling fires involving casualties and/or rescues** in England in 2016/17 was 7 minutes 40 seconds. This was an increase of 6 seconds compared with 2015/16 and 39 seconds since 2011/12.

[1] For more detailed technical definitions of different types of fire, see the Fire Statistics Definitions document.
[2] Other outdoor fires are fires in either primary outdoor locations, or fires in non-primary outdoor locations that have casualties or five or more pumping appliances attending. For a full definition of other outdoor locations, please refer to the definitions document.
[3] This excludes chimney fires. For a full definition of chimney fires, please see the definitions document.

2 Introduction

Each time a fire and rescue service (FRS) attends an incident in England, details of that incident are uploaded to the Home Office's Incident Recording System (IRS) by the FRS. The IRS is used as the source for all the statistics in this publication, except for table FIRE1403 (Chartered Institute of Public Finance & Accountancy). More information on the IRS can be found at:

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

This statistical release presents statistics on response times to fires between April 2016 and March 2017. It focuses on trends in average (mean) response times in England.

Response time is defined as the duration from time of call to time of arrival of the first vehicle at the scene of the incident. Some FRSs have local definitions for response times which may not include the call time, however this should not affect records in the IRS.

This publication is accompanied by reference data tables. All fire statistics tables can be found at: www.gov.uk/government/statistical-data-sets/fire-statistics-data-tables

The following tables have been updated alongside this publication:

FIRE: 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1403.

These tables include data on Fire and Rescue Authority (FRA) areas. It is important to note that it is not possible to directly compare response times between different geographical areas as there are a range of factors that affect average response times, for example, population density and firefighter crewing arrangements.

Changes which have been made to this publication since last year's release include:

- moving area of fire damage (tables FIRE0204 and FIRE0305) to the Detailed analysis of fires release.

The IRS is a continually updated database, with FRSs adding incidents on a daily basis. The figures in this release refer to records of incidents that occurred up to and including 31 March 2017. This includes incidents that reached the IRS by 5 December 2017 when the database was "frozen" for the purpose of analysis. As the dataset was "frozen" on 5 December 2017 the statistics published may not match those held locally by FRSs and revisions may occur in the future.

Around 17% of 2016/17 incidents were excluded for the purpose of analysis (compared with 16% of 2015/16 incidents) e.g. where an FRS learned of the fire when it was known to have already been extinguished ('late calls') and where the recorded response time for an incident

was over an hour or less than one minute. This is to help prevent erroneous data or exceptional incidents from skewing the averages. For more detail on these exclusions and definitions for terms used throughout this publication, please see the accompanying Fire Statistics Definitions document:

www.gov.uk/government/uploads/system/uploads/attachment_data/file/675796/response-times-to-fires-definitions-january2018.pdf

3 Variation in response times

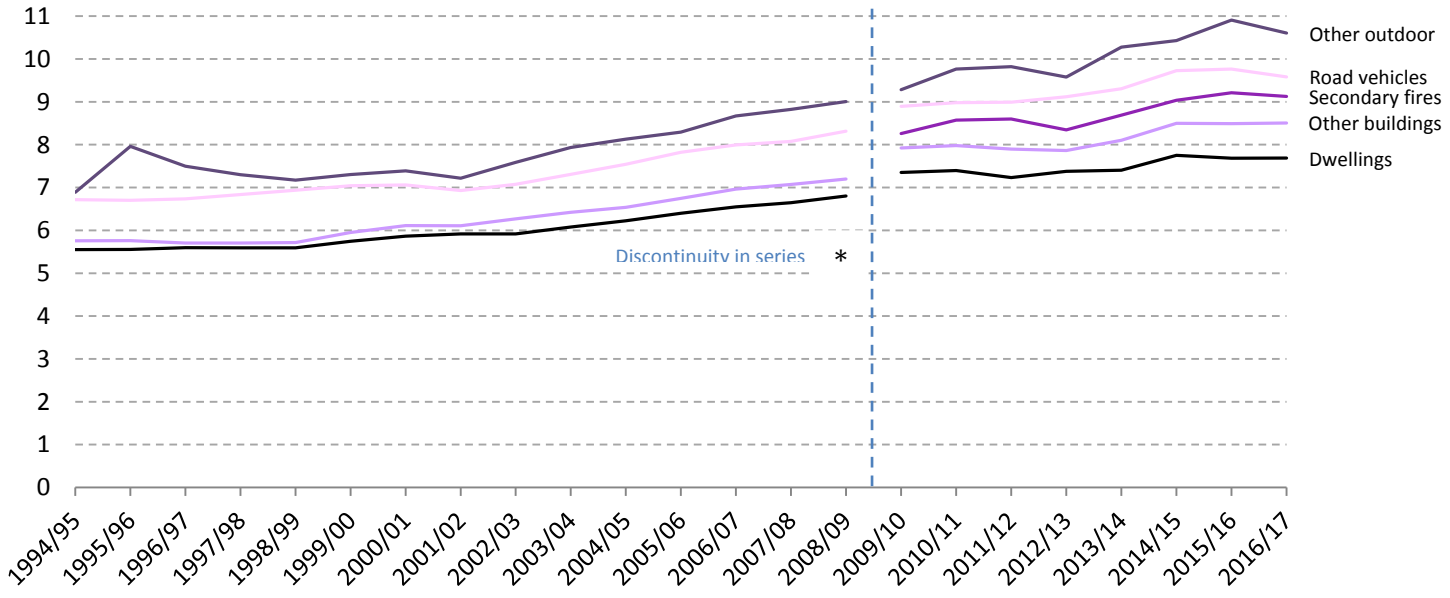
Response times by type of fire attended

The average response time[4] to primary fires (more serious fires that harm people or cause damage to property[5]) in England in 2016/17 was 8 minutes and 44 seconds, a decrease of 3 seconds since last year but an increase of around 33 seconds since five years ago in 2011/12.

Response times to secondary fires (which can broadly be thought of as smaller outdoor fires, not involving people or property[4]) have decreased by 5 seconds, to 9 minutes and 8 seconds since last year. This is an increase of around 32 seconds since 2011/12.

Overall, response times to fires have increased gradually over the past 20 years (Figure 3.1). A range of possible factors could contribute to this. These may include changing traffic levels, health and safety policies, 'drive to arrive' policies[6] and control staff typically asking more questions of the caller to better assess the risk and attendance needed. However, it is difficult to isolate the impact of any of these individual factors, and there may also be other factors, locally or nationally, which affect response times.[7]

Figure 3.1 Average response times (minutes) by type of fire, England; 1994/95 to 2016/17



Source: FIRE1001

*Please see the definitions document on the discontinuity in series.

[4] Response time is defined here as the duration from time of call to time of arrival of the first vehicle at the scene of the incident
[5] For more detailed technical definitions of different types of fires, see the Definitions document.
[6] 'Drive to arrive' policies require drivers to modify driving depending on risk, in order to reduce the number of incidents whilst mobile.
[7] For a more detailed discussion of factors which may affect response times, see chapter 3 of 'Fire incidents response times, England, 2011 to 2012'.

While response times to all types of fires have increased since 2011/12, only 'other buildings' has increased since 2015/16 (by an average of 1 second) with the others showing either no change (primary dwelling fires) or decreases of up to 18 seconds ('other outdoor'). Of the dwelling fires in 2016/17, the average response time to fires in flats was 6 minutes 55 seconds, compared with 8 minutes 6 seconds for houses/bungalows and 7 minutes 42 seconds for 'other dwellings'. This probably reflects that most flats are in urban locations and therefore generally within closer proximity to a fire station than rural dwellings.

The table below provides a summary of the trends in the last year for response times to fires.

Table 1 Response times to fires by type of fire with a summary of trends[8], England; 2016/17

Type of Fire[9]	2016/17	Change since 2015/16	Change since 2011/12
Primary	8 minutes 44 seconds	3 seconds ↓	33 seconds ↑
Dwelling	7 minutes 41 seconds	0 seconds =	27 seconds ↑
Other building	8 minutes 30 seconds	1 second ↑	36 seconds ↑
Road vehicle	9 minutes and 35 seconds	11 seconds ↓	36 seconds ↑
Other outdoor	10 minutes and 36 seconds	18 seconds ↓	47 seconds ↑
Secondary	9 minutes 8 seconds	5 seconds ↓	32 seconds ↑

Source: FIRE1001

Response times by type of fire and rescue authority (FRA)

Of the 45 fire and rescue authorities (FRAs, down from 46 last year since the merger of the Dorset and Wiltshire fire and rescue services), 19 showed a decrease in average response time to primary fires between 2015/16 and 2016/17 (including Dorset and Wiltshire FRS when compared with the weighted average of their respective areas in the previous year), 20 showed an increase and six showed little-to-no appreciable change. (Source: FIRE1005)

FRAs can be split into three rural-urban classifications: predominantly rural, significantly rural and predominantly urban.[10] As shown in Figure 3.2, average response times are lower in predominantly urban areas. The difference in average response times between predominantly urban and predominantly rural FRAs has been around two to three minutes

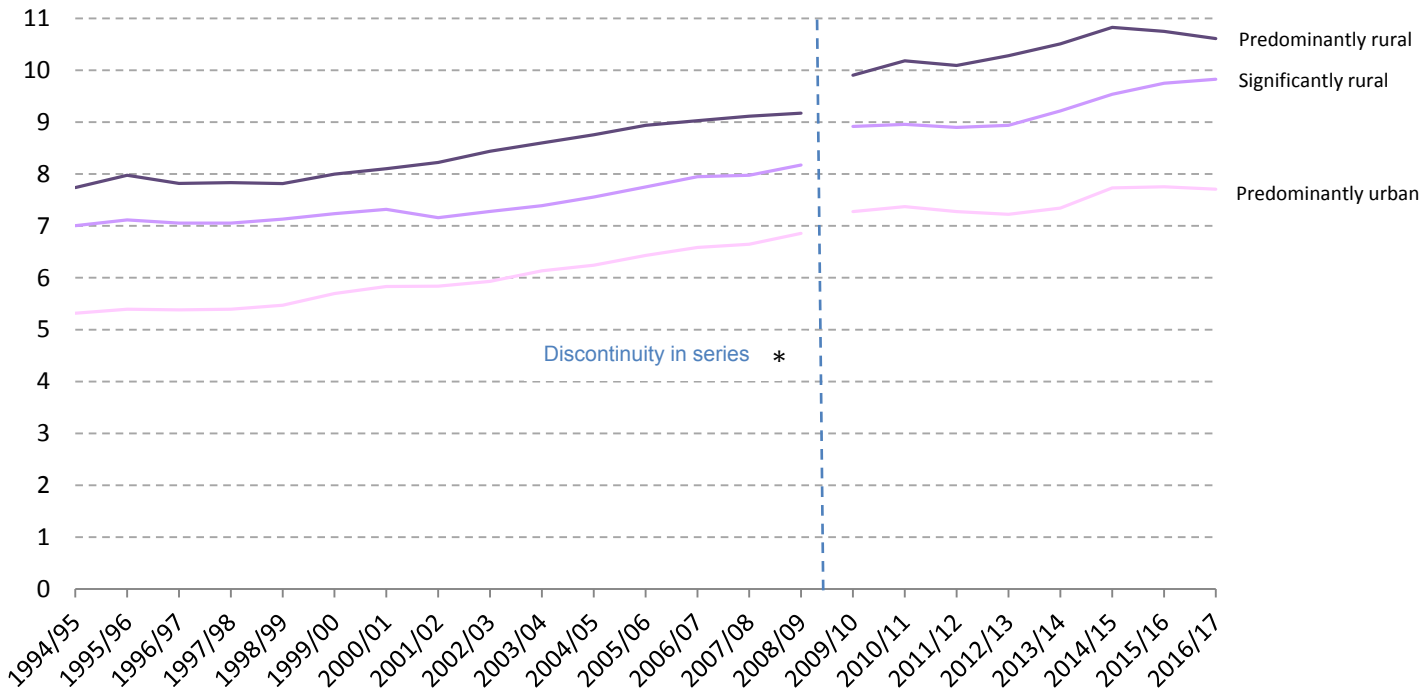
[8] Arrows in this table are not to scale. Arrows pointing upwards indicate an increase and arrows pointing downwards a decrease in response time.
[9] This excludes chimney fires. For a full definition of chimney fires, please refer to the definitions document.
[10] As defined by the Department for Environment, Food and Rural Affairs' '2011 Rural-Urban Classification of Local Authorities and other geographies'.

every year since 1994/95. All three types of FRA have shown gradual increases in average response time over the past twenty years. However, predominantly urban areas decreased in 2016/17 and predominantly rural areas have had two consecutive decreases since 2014/15. (Source: FIRE1003)

The average response time in England during 2016/17 for:

- **predominantly rural** FRAs was 10 minutes and 37 seconds, a decrease of 8 seconds since 2015/16 and an increase of 31 seconds since 2011/12;
- **significantly rural** FRAs was 9 minutes and 50 seconds, an increase of 5 seconds and 56 seconds since last year and five years prior, respectively;
- **predominantly urban** FRAs was 7 minutes 43 seconds, a decrease of 2 seconds and increase of 27 seconds since 2015/16 and 2011/12, respectively.

Figure 3.2 Average response times (minutes) by FRA type, England; 1994/95 to 2016/17



Source: FIRE1003

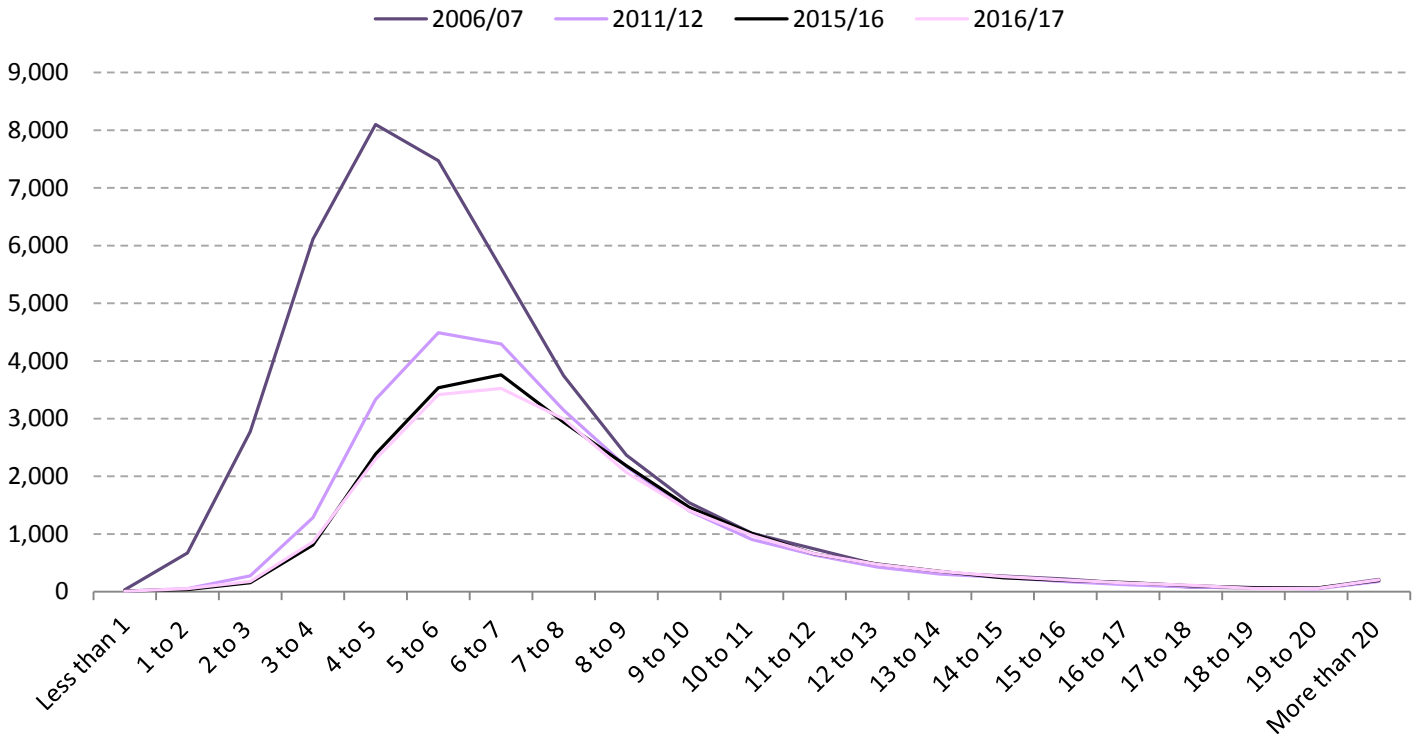
*Please see the definitions document on the discontinuity in series.

4 Distribution of response times

Figures 4.1 and 4.2 show the distribution of fires by one minute response time bands for fires in dwellings and other buildings (source table FIRE1004). The shapes of the curves reflect both the long-term reduction in the total number of fires between 2006/07 and 2016/17 (decreases of 32% and 42% for dwellings and other buildings, respectively; source table FIRE0102) and the increasing response times to those fires.

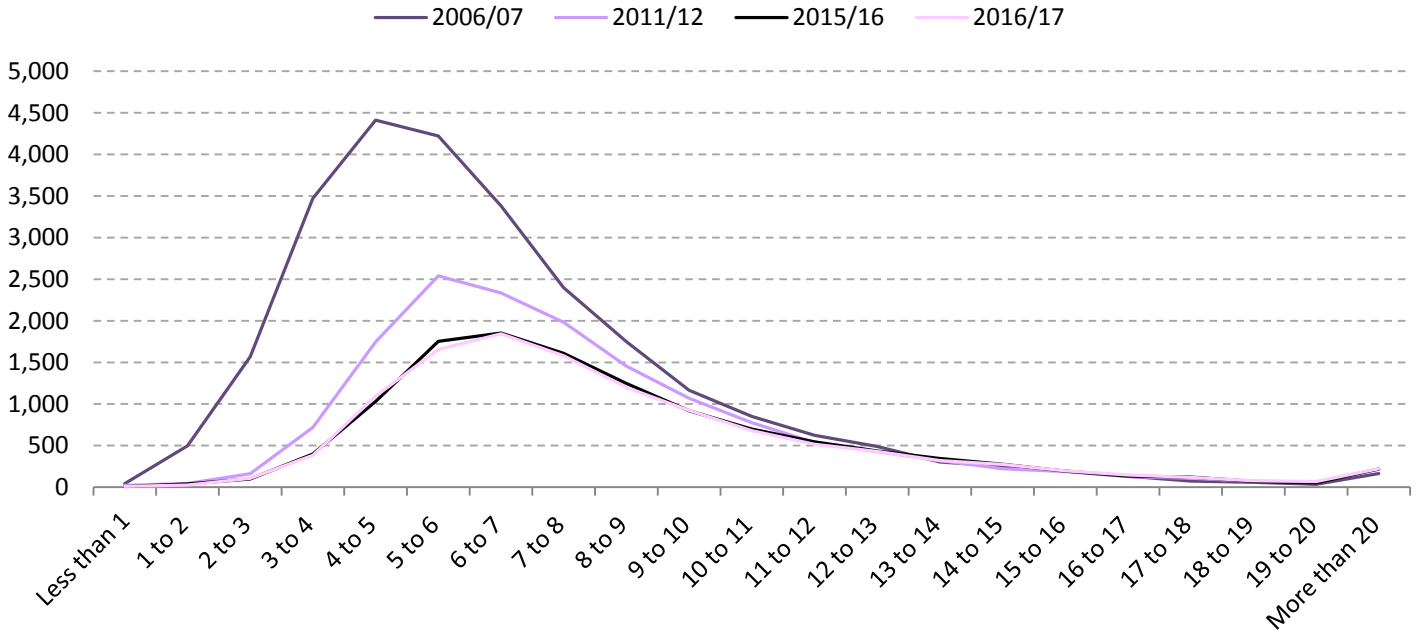
- In 2016/17, the majority (54%; 29,857) of primary fires were responded to within 8 minutes, while the most frequent response time band was 6 to 7 minutes (15%; 8,164).
- For dwelling fires, the majority (51%; 10,344) were responded to within 7 minutes and the most frequent time band was 6 to 7 minutes (17%; 3,525) in 2016/17.
- For fires in other buildings, the majority (56%; 6,700) were responded to within 8 minutes and the most frequent time band was 6 to 7 minutes (16%; 1,843).
- For road vehicle fires, the majority (56%; 9,870) were responded to within 9 minutes, and the most frequent time band was 6 to 7 minutes (13%; 2,274) in 2016/17.
- For primary 'other outdoor' fires, the majority (56%; 2,792) were responded to within 10 minutes and the most frequent time band was 7 to 8 minutes (11%; 531)) in 2016/17.
- In 2016/17, the majority (60%; 46,715) of secondary fires were responded to within 9 minutes (49% within 8 minutes), while the most frequent response time band was 7 to 8 minutes (14%; 10,744).

Figure 4.1*: Number of fires attended by FRSs in one minute response time bands for fires in dwellings, England; 2006/07 to 2016/17



Source: FIRE1004

Figure 4.2*: Number of incidents in one minute response time bands for fires in other buildings, England; 2006/07 to 2016/17



Source: FIRE1004

*Please note that in these charts each incident is recorded by the midpoint of each response time band.

5 Response times outcomes and measures

It is difficult to isolate the impact of a change in response times. There is not a straightforward relationship between response times and the outcomes of a fire as the type of fire and the time elapsed before the fire is discovered (both factors outside the control of FRSs) will have an influence on the outcome. However, some measureable proxy outcomes include non-fatal casualties, fire-related fatalities and the extent of fire damage. This chapter compares the trends in these outcomes with the trends in response times.

As previously stated there has been a long-term increase in response times over the last 20 years, however over the same period, the number of non-fatal casualties, fire-related fatalities and the extent of fire damage have shown a long-term downward trend.

Dwellings

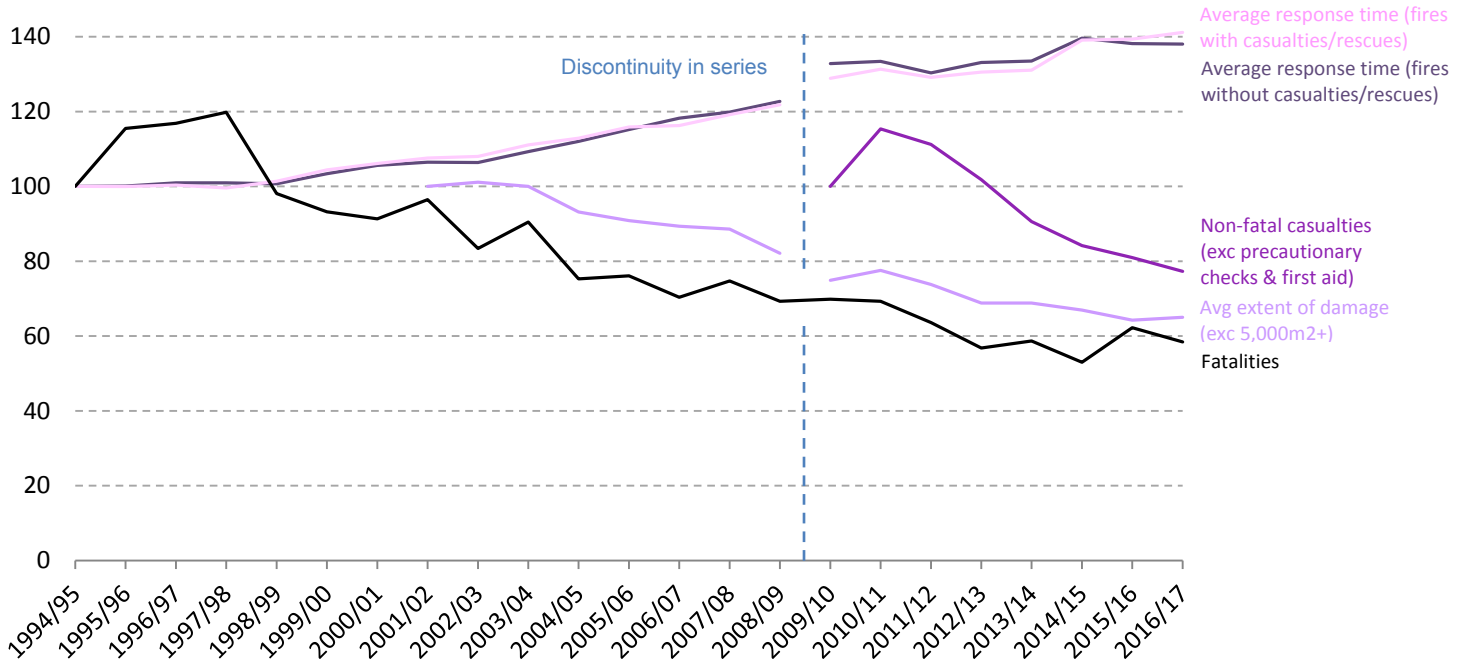
- The average response time to dwelling fires involving casualties and/or rescues in England in 2016/17 was 7 minutes 40 seconds. This was an increase of 6 seconds since 2015/16 and 39 seconds since 2011/12. (Source: FIRE1002)
- The number of fire-related fatalities in dwelling fires had decreased by six per cent in 2016/17[11] compared with 2015/16, whilst the number of non-fatal casualties (excluding those requiring first aid or precautionary checks) had decreased by five per cent over the same period. (Source: FIRE0502)
- In 2016/17, the average area of fire damage to dwellings (excluding those over 5,000m^2) in England increased by one per cent compared with 2015/16, while the average response time to dwelling fires was unchanged over the same time. (Source: FIRE0204, FIRE1001)

Other buildings

- The average area of fire damage to other buildings (excluding those over 1,000m^2) decreased by one per cent since 2015/16, while the average response time to other building fires was essentially unchanged (1 second increase) over the same time period (Figure 5.2). (Source: FIRE0305, FIRE1001)

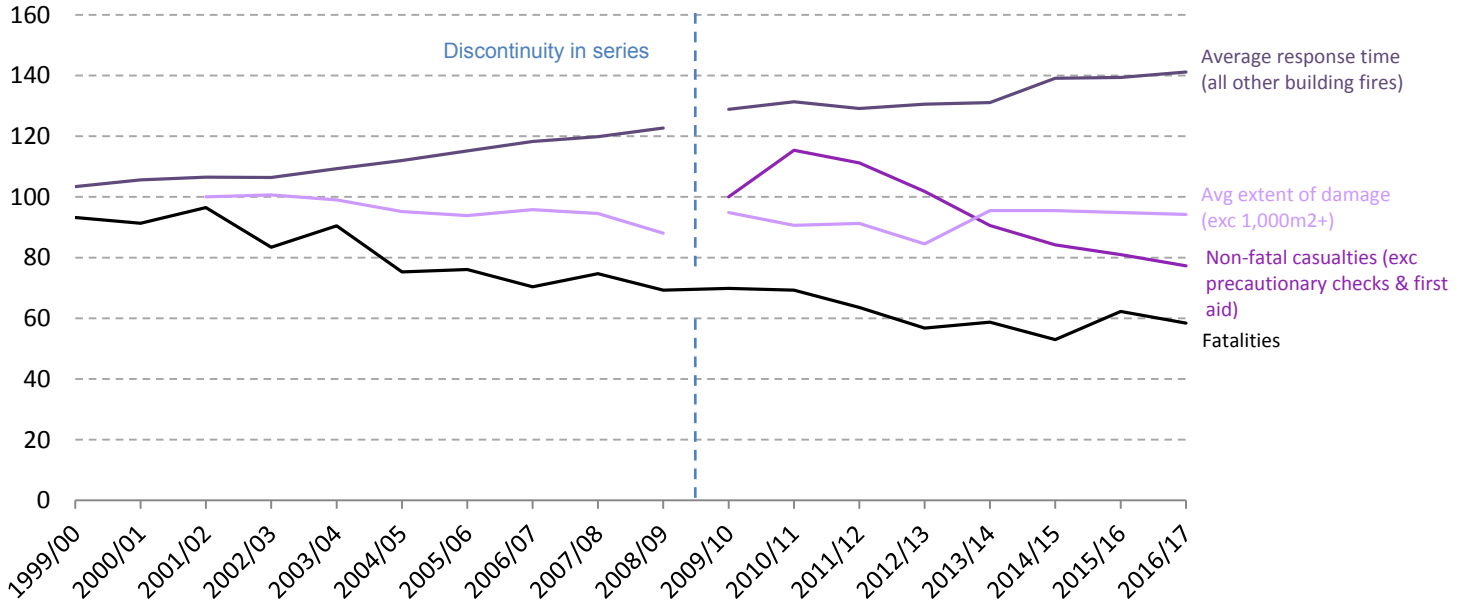
[11] The financial year 2016/17 did not cover the tragic events of the Grenfell Tower fire.

Figure 5.1. Response times and outcome measures for dwelling fires, England; 1994/95 to 2016/17 (Index 1994/95 = 100; except Index 2001/02 = 100 for non-fatal casualites)



Source: FIRE0204, FIRE0502, FIRE1002

Figure 5.2: Response times and outcome measures for other building fires, England; 1999/00 to 2016/17 (Index 1994/95 = 100 for average response time and fatalities; Index 2001/02 = 100 for average extent of damage; Index 2009/10 = 100 for non-fatal casualties)



Source: FIRE0305, FIRE0502, FIRE1002

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