Department for Communities and Local Government

Fire Incidents Response Times: April 2014 to March 2015, England

Fire & Rescue

Statistical Release

19 November 2015

- The average response time to dwelling fires in England in 2014-15 was 7 minutes 45 seconds, an increase of 20 seconds since last year. This is a continuation of a general long term increase in response times to fires in dwellings. (Chart 1a)
- The average response time to other building fires in England in 2014-15 was 8 minutes 28 seconds, an increase of 21 seconds since last year. This is also consistent with the long term upward trend. (Chart 1a)
- The average response time to all other location types (road vehicles, other outdoor primary fires and secondary fires) also showed increases since last year. (Chart 1a)
- Fire and rescue authorities (FRAs) in predominantly urban areas have the lowest average response time, of 7 minutes 42 seconds in 2014-15 compared to 10 minutes 50 seconds in predominantly rural areas. (Section 2)
- Of the 46 FRAs, 37 showed an increase in average response time to primary fires between 2013-14 and 2014-15. (Section 2)
- In 2014-15 the most common response time to dwelling fires was between six and seven minutes. For the five previous years the most frequent response time was between five and six minutes. (Section 3)
- The average response time to dwelling fires involving a rescue or casualty in England in 2014-15 was 7 minutes 32 seconds. This is 25 seconds longer than 2013-14, although the total number of both fatal and non-fatal casualties both decreased by six per cent in 2014-15 compared to the previous year. (Section 4)

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Introduction

This Statistical Release presents official statistics on fire incident response times between April 2014 and March 2015. It focusses on trends in average response times in England at the national level. Other data indicate that response times are not the only factor affecting numbers of casualties and amounts of damage from fire.

This publication defines response time as the duration from time of call to time of arrival at scene of the first vehicle. Other sources, such as the Fire and Rescue Authorities (FRAs) themselves, may use different definitions.

Detailed tables are provided in an accompanying spreadsheet. This can be downloaded from:

https://www.gov.uk/government/statistics/fire-incidents-response-times-england-2014-to-2015

These tables include data on FRA areas. If attempting to compare response times between different geographical areas, it is important to bear in mind that there are a range of factors that affect average response times, for example, population density and firefighter crewing arrangements.

1. Response times by location type

Average response times to fires in all types of location have been steadily increasing over the last twenty years. Chart 1a shows that, of the five location types, dwelling fires have the shortest response time, followed by other building fires, probably reflecting the priority of fire crews and the urban location of these location types compared to secondary fires, road vehicle fires and other outdoor primary fires.

The average response time in England during 2014-15 to:

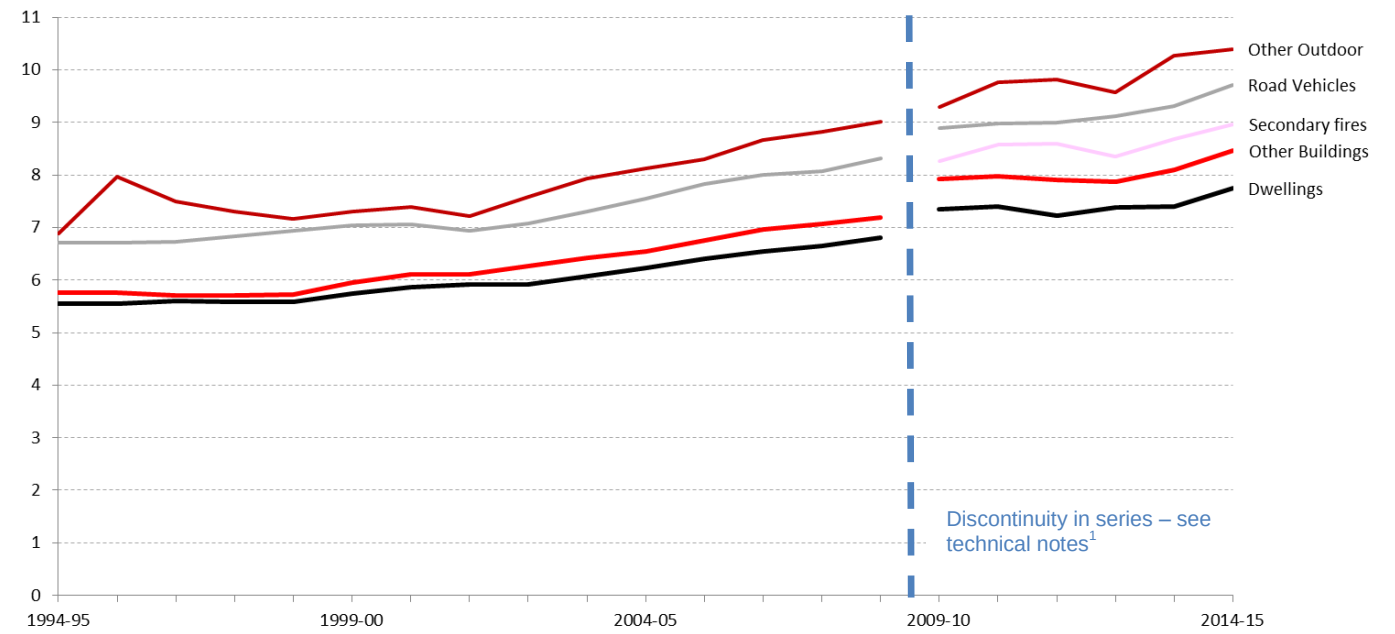
- dwelling fires was 7 minutes 45 seconds, an increase of 20 seconds since 2013-14, and an increase of 24 seconds since 2009-10. Fires in flats are responded to faster, on average, than those in houses/bungalows (6 minutes 56 seconds, compared to 8 minutes 10 seconds). This probably reflects that most flats are in urban locations, and easier to access for fire stations.

- other building fires was 8 minutes 28 seconds, an increase of 21 seconds compared to the previous year, and 32 seconds since 2009-10.

- road vehicle fires was 9 minutes 42 seconds, an increase of 24 seconds and 49 seconds since last year and five years ago, respectively.

The average response times across all location types in 2014-15 increased compared to last year and five years ago, and were the longest response times recorded in the past 20 years.

Chart 1a: Average response times (minutes) by location type, England, 1994-95 to 2014-15



[1] The difference in average response times between 2008-09 and 2009-10 is over half a minute for most property types (e.g. dwellings, other buildings). Part of this increase reflects a measurement discontinuity caused by a move from a paper-based to a more comprehensive online data collection tool in 2009, which means comparisons over this time should be treated with care. Further information on this discontinuity can be found in the Technical Notes section.

Further detail on these figures can be found in Fire Incidents Response Times Table 1a, 1b and 1c : https://www.gov.uk/government/statistics/fire-incidents-response-times-england-2014-to-2015

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

Of the 46 FRAs, 37 showed an increase in average response time to primary fires between 2013-14 and 2014-15, five showed a decrease, and two showed no change (to the nearest tenth of a minute). One FRA could not provide robust data for 2014-15 and one did not attend enough incidents for average times to be meaningful.

As shown in Chart 2a, average response times are lower in predominantly urban areas (as defined by the Department for Environment, Food and Rural Affairs' Urban-Rural classification). The difference in average response times between predominantly urban and predominately rural fire authorities has been around two to three minutes in every year since 1994-95, with the gap increasing in recent years. All three types of FRAs, as defined by this classification, have shown gradual increases in average response time over the past twenty years and recorded their highest figure over that time in 2014-15.

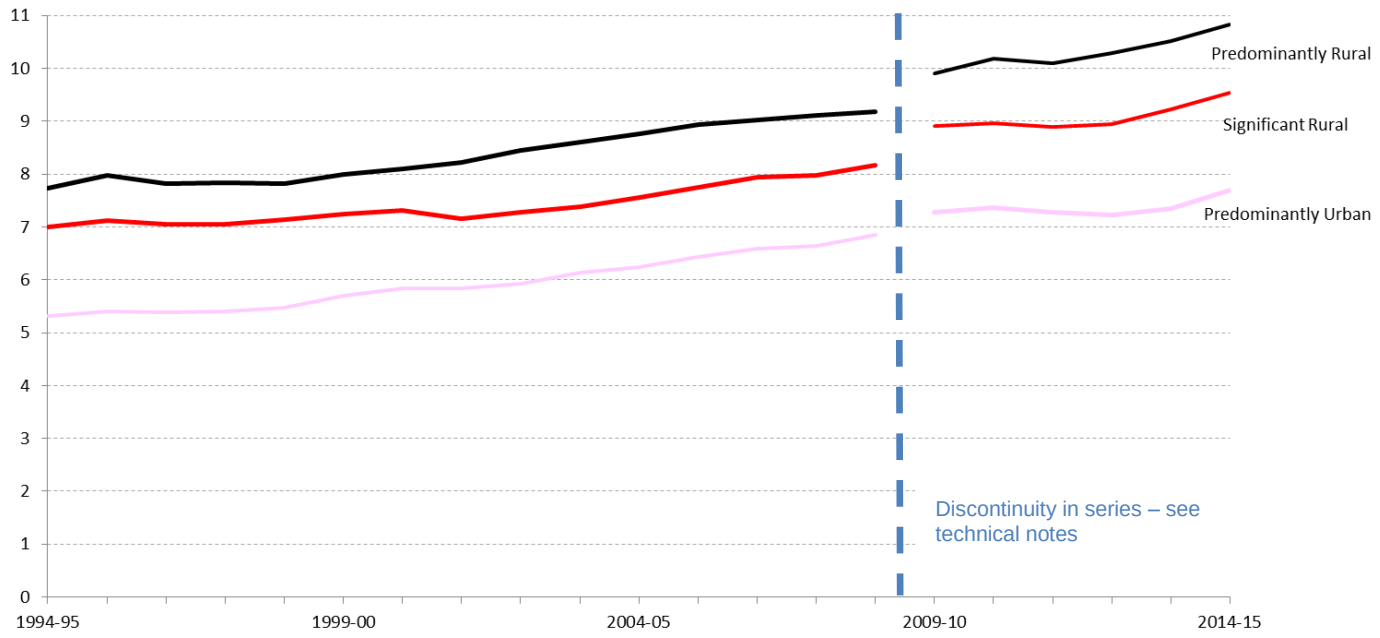
The average response time in England during 2014-15 in:

- predominantly rural FRAs was 10 minutes 50 seconds, an increase of 19 seconds since 2013-14, and 56 seconds since 2009-10.

- significantly rural FRAs was 9 minutes 32 seconds, an increase of 19 seconds and 37 seconds since last year and five years ago respectively.

- predominantly urban FRAs was 7 minutes 42 seconds, an increase of 21 seconds and 25 seconds since 2013-14 and 2009-10 respectively.

Chart 2a: Average response times (minutes) by FRA type, in England, 1994-95 to 2014-15



Further detail on these figures can be found in Fire Incidents Response Times Tables 3a to 3e : https://www.gov.uk/government/statistics/fire-incidents-response-times-england-2014-to-2015

3. Distribution of response times

Charts 3a and 3b show the distribution of incidents by their response time band. The shapes of the curves reflect both the substantial reductions in the total number of fires over recent years - between 2004-05 and 2014-15, the number of dwelling and other building fires decreased by 34 and 50 per cent respectively - and the increasing response times to them.

2014-15 was the first year when the time band with the highest frequency of both dwelling and other building fire instances was between six and seven minutes. For the five previous years between five and six minutes was the highest frequency band.

Despite being the band with the highest frequency, the numbers of incidents with a response time of between six and seven minutes decreased by three per cent (for dwellings) and eight per cent (for other buildings) compared to the previous year.

Chart 3a: Number of incidents in one minute response time bands for fires in dwellings, England, 2004-05 to 2014-15

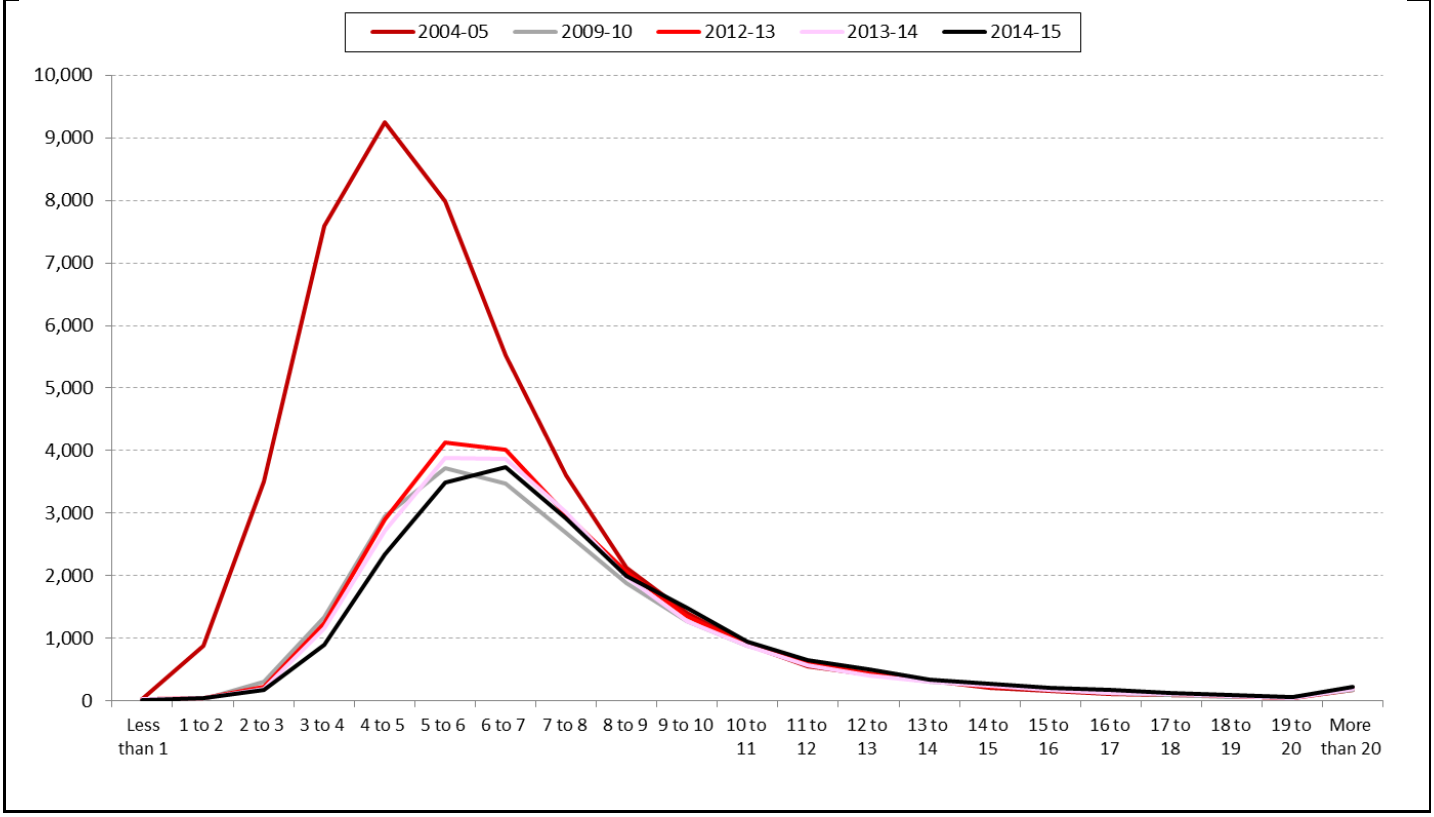
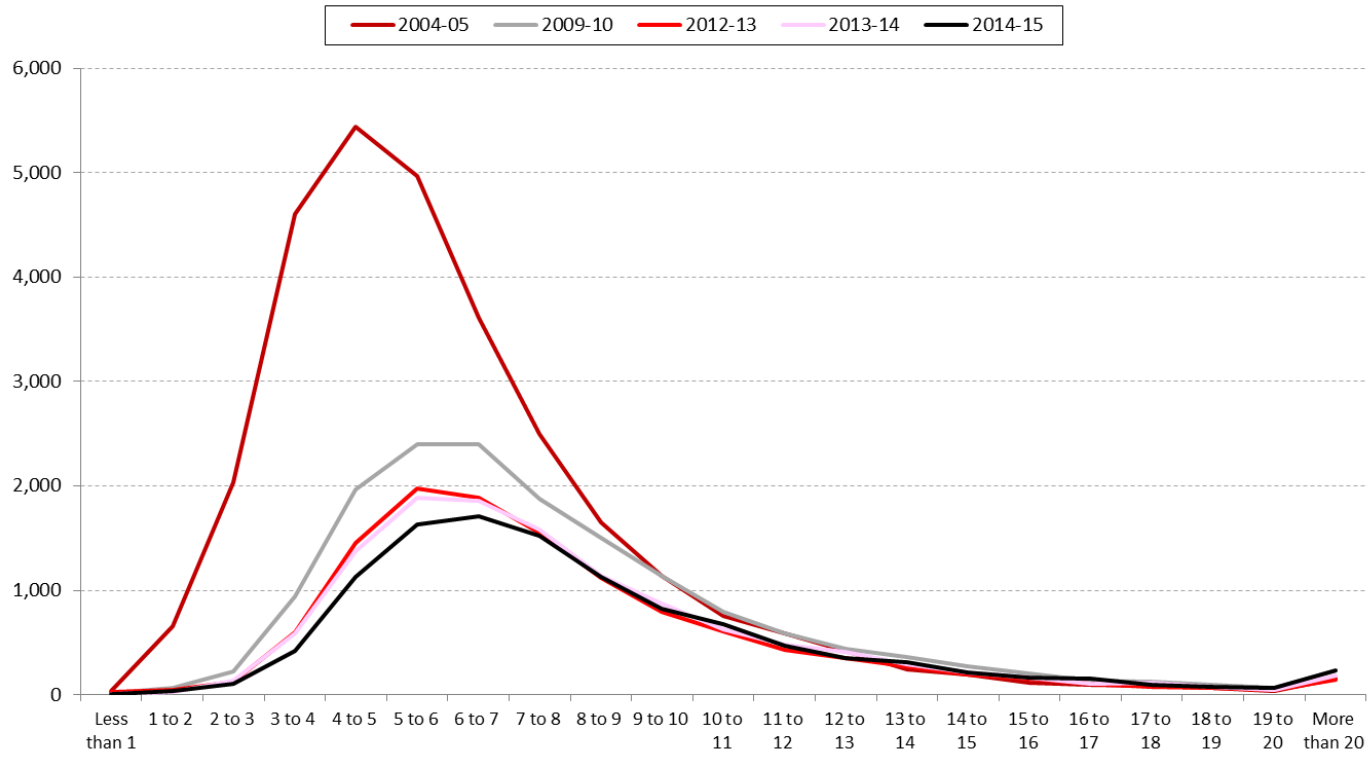


Chart 3b: Number of incidents in one minute response time bands for fires in other buildings, England, 2004-05 to 2014-15



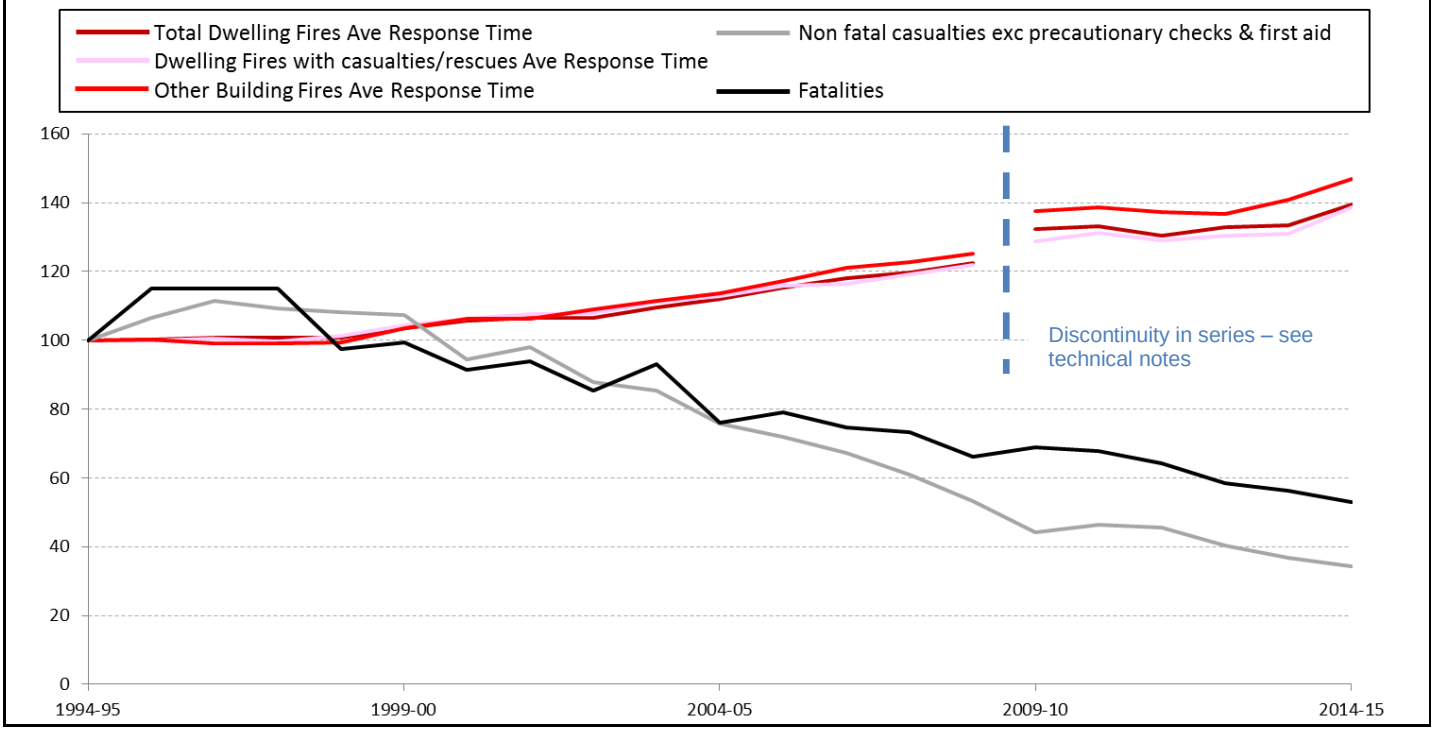
Further detail on these figures can be found in Fire Incidents Response Times Tables 2a to 2b : https://www.gov.uk/government/statistics/fire-incidents-response-times-england-2014-to-2015

4. Response times and outcome measures

As Chart 4a shows, whilst response times have increased gradually over the past 20 years, the numbers of fatalities and casualties have tended to fall. These decreases correspond with improvements in fire safety and prevention which would seem to have outweighed effects of longer response times. Examples of these improvements include the wider ownership of smoke alarms and other building safety systems and features, improved audits and enforcement activity.

The average response time to dwelling fires involving casualties or rescues in England in 2014-15 was 7 minutes 32 seconds. This is an increase of six per cent (25 seconds) compared to 2013-14. Over the same period, the numbers of fatal and non-fatal fire casualties (excluding those requiring first aid or precautionary checks) both decreased by six per cent.

Chart 4a: Comparing average response times with fatalities and casualties, England. 1994-95 to 2014-15 (Index 1994-95 = 100)



As Chart 4b shows, while response times have increased gradually over the past 13 years, the extent of damage (due to smoke, heat, flame and water) to dwellings and other buildings has generally fallen over the same time frame.

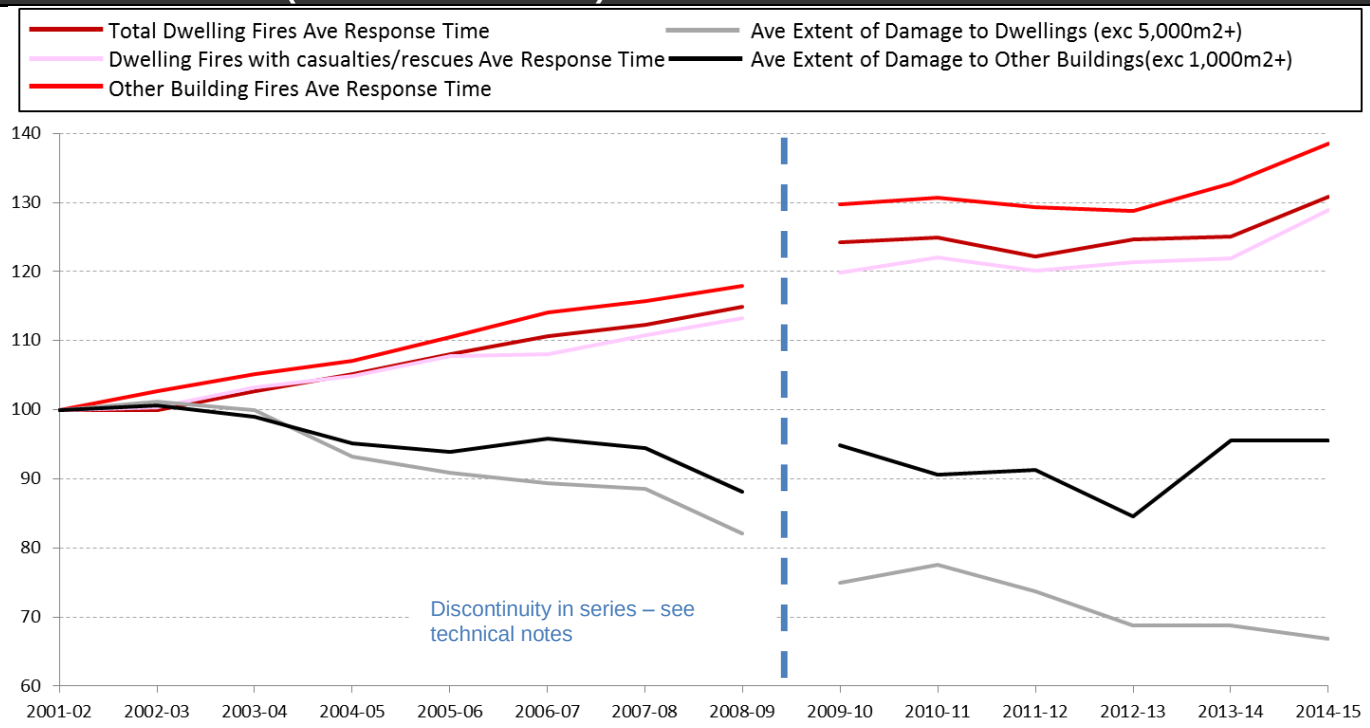
In 2014-15 the average area of fire damage to dwellings (excluding those over 5,000m^2) in England decreased by three per cent, while the average response time to dwelling fires increased by five per cent (20 seconds) over the same time.

The average area of fire damage to other buildings (excluding those over 1,000m^2) remained virtually unchanged, while the average response time to other building fires increased by four per

cent (21 seconds) over the same time.

Note that the chart uses measures that exclude dwellings with more than 5,000m^2 of damage and other buildings with more than 1,000m^2 of damage because these large fires can skew the averages; however, for completeness, other measures are available in Table 4 which accompanies this release. It should be noted that this excludes less than 0.1 per cent of dwelling incidents and just over one per cent of other building incidents.

Chart 4b: Comparing average response times with average area of damage, England. 2001-02 to 2014-15 (Index 2009-10 = 100)



Further detail on these figures can be found in Fire Incidents Response Times Table 4 :
https://www.gov.uk/government/statistics/fire-incidents-response-times-england-2014-to-2015

Definitions

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

Response Time

A response time measures the minutes and part minutes taken from time of call to time of arrival at scene of the first vehicle. The following incidents have been excluded from the average response time calculations:

a. Where there was heat and smoke damage only.
b. Where road vehicle was abandoned.
c. Where the location of fire was derelict.
d. Where an FRA learned of the fire when it was known to have already been extinguished. Such incidents are known as 'late calls'.
e. Where the response time for an incident was over an hour or less than one minute.

The last two of these exclusions have been applied to avoid erroneous data or exceptional incidents from skewing the averages.

Primary Fires

Primary fires are those where one or more of the following apply:

a. All fires in buildings, some outdoor structures and vehicles that are not derelict.
b. Any fires involving casualties or rescues.
c. Any fire attended by five or more pumping appliances.

Secondary Fires

Secondary fires are the majority of outdoor fires including grassland, refuse fires and derelict buildings, unless the fire involves any of the following: casualties or rescues, four or fewer pumping appliances attending.

Fatalities

Even if a casualty dies subsequently, any fatality whose cause is attributed to a fire is included. There are also occasional cases where it transpires subsequently that fire was not the cause of death. For both of these reasons, fatalities data may, therefore, be subject to revision.

Casualties

In order to be able to present a time series that is comparable over time, the non-fatal casualty data in this publication include all non-fatal casualties who went to hospital, but exclude first aid cases and where there was no obvious injury, but a precautionary check was recommended.

Technical notes

Data collection

Numbers of fire incidents excluded from calculations

Raw incident data are collected from the Incident Recording System. Certain incidents are excluded from the average response time calculation (see definition of response times in the previous section). This meant that in 2014-15 17 per cent of incidents were excluded from the response times' calculations. Table A1 below shows the number of incidents that have been excluded.

Table A1: Number of fire incidents and exclusions from response times, England, 2014-15

	Total number of incidents	Heat smoke damage only	Late call incidents	Incidents where response time was over 60 minutes	Incidents where response time was under 1 minute	Incidents in derelict locations	Incidents at abandoned vehicles	**Number of incidents after exclusions**
Primary	**70,880**	14,234	1,296	498	372	153	3,332	**52,121**
Dwelling	**31,223**	9,947	878	182	101	27	0	**20,683**
Other building	**15,483**	3,817	287	105	77	107	0	**11,318**
Road vehicles	**19,422**	367	88	152	157	5	3,332	**15,565**
Other outdoor	**4,752**	103	43	59	37	14	0	**4,555**
Secondary Fires	**78,653**	0	205	1,641	1,858	4,688	0	**72,531**

Some excluded incidents are shown in the table above under more than one heading (for example, late calls that were responded to in over 60 minutes). Because of this double counting, the sum of the exclusions will be greater than the difference between total number of incidents before and after exclusions.

Data quality

Tyne and Wear 2014-15 Response Time data

DCLG were informed by Tyne and Wear that 2014-15 response time data for their FRA were not robust. While they are resolving the issue we have used their 2013-14 response time data for the calculation of national and other totals in this release and its associated tables. This may therefore slightly affect the robustness of these totals in this release and may result in greater than usual revisions to 2014-15 data in next year's release.

Discontinuity of Response Times data before and after April 2009

There is a noticeable discontinuity in average response times between 2008-09 and 2009-10 of over half a minute for most property types (e.g. Dwellings, Other Buildings – see appendix table 1a). While part of this increase may be genuine (the factors mentioned in Fire and Rescue Response Times 2011-12 included increased traffic congestion), it appears likely that there is also a measurement discontinuity.
Analysis of the change in average response times from 2008-09 to 2009-10 identified six FRAs whose reported average response time increased by 1.2 minutes or more. Discussion with these FRAs helped to identify the various factors described in Fire and Rescue Response Times 2011-12.
There is also the possibility of a further reason for the apparent discontinuity, namely that there may have been some inaccuracy in the largely paper-based Fire Data Report system which was in use until March 2009. Arrival times are now being recorded with more accuracy using a mobile data terminal on board the fire appliance, once the appliance has arrived at the scene. Previously, arrival times were transmitted to control via radio when the appliance was in the vicinity of the incident, enabling fire-fighters to then be focussed on preparing to disembark from the vehicle. With on-board data terminals and automatic recording of the nearest second under the Incident Recording System (since April 2009), incident response times should now be recorded consistently, with high accuracy.

Discontinuity of extent of damage data before and after April 2009
There is a clear discontinuity between 2008-09 and 2009-10 in the average area of damage reported in fires in Other Buildings (i.e. those whose use is not as Dwellings). The stability of the data before and after April 2009 suggests that this is not a real change, but rather results from the introduction of the new Incident Recording System in since April 2009.

Review of the impact of periods of industrial action.
Throughout 2013-14 and 2014-15 there were several periods of industrial action where operational Firefighters have been out on strike.
Information on this industrial action and the position of DCLG is available here:
https://www.gov.uk/government/publications/firefighters-pension-scheme-reforms
During periods of industrial action local contingency plans are in place to respond to emergency calls. Due to fewer appliances being available during these periods it was expected that response times would increase slightly. The records submitted to the Incident Recording System for strike periods have been included in the analysis for 2014-15.
There were 26 periods of industrial action during 2014-15, and details on these incidents are given. There were 3,550 primary fire incidents recorded on the IRS on strike days last year which represent seven per cent of all fire records used for primary fire average response times calculations in 2014-15. The average response time for primary fires on strike days in 2014-15 was ten minutes 14 seconds, compared to eight minutes 43 seconds across the whole year.

Revisions policy

This policy has been developed in accordance with the UK Statistics Authority Code of Practice for Official statistics and the Department for Communities and Local Government Revisions Policy

(found at https://www.gov.uk/government/publications/statistical-notice-dclg-revisions-policy). There are two types of revisions that the policy covers:

Non-Scheduled Revisions

Where a substantial error has occurred as a result of the compilation, imputation or dissemination process, the statistical release, live tables and other accompanying releases will be updated with a correction notice as soon as is practical.

Scheduled Revisions

It is expected that data should not be subject to major revision. However, if any revisions are necessary due to the receipt of subsequent data, revisions will then be made to statistics relating to the period of one preceding financial year i.e. upon first publication of 2014-15 data, any revisions to statistics for periods during the financial year of 2013-14 would be made. It is also intended that revisions to any statistics relating to any given time period would be made only once, and data would not subsequently be revised further, barring exceptional circumstances.

Uses of the data

Users of response time data should bear in mind that the data may fluctuate, as the locations of fires will vary from one period to another.

The spreadsheet tables accompanying the release show the numbers of incidents on which each response time average has been calculated. Averages based on smaller numbers of incidents will naturally tend to be more prone to fluctuation.

User engagement

Users are encouraged to provide feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed and encouraged. Responses should be addressed to the "Public enquiries" contact given in the "Enquiries" section below.

The Department's engagement strategy to meet the needs of statistics users is published here: https://www.gov.uk/government/publications/engagement-strategy-to-meet-the-needs-of-statistics-users

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Information on Official Statistics is available via the UK Statistics Authority website:
https://www.gov.uk/government/statistics/announcements

Information about statistics at DCLG is available via the Department's website:
www.gov.uk/government/organisations/department-for-communities-and-local-government/about/statistics

This document/publication is also available on our website at www.gov.uk/dclg

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