



Home Office

## **Publishing Incident Recording System data on the fire and rescue service at an incident level:**

### **‘Other building’ fires dataset guidance**

Produced by the Fire Statistics team

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# 1 Background

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## Data Quality

Incident records in the Incident Recording System (IRS) are the responsibility of, and quality assured by, fire and rescue services (FRSs). The Home Office and FRSs work together to improve the data within the IRS and minimise any inconsistencies or errors. However, as the IRS was not designed with record level datasets in mind, a very small number of previously unidentified inconsistencies have been discovered ([see project overview for further detail](#)).

IRS incident records are a judgement call of the lead fire officer at the time of the incident. The quality of the information provided by fire and rescue services is variable and its accuracy cannot be guaranteed, especially at record level. For instance, some records involve estimation by those in attendance.

## Dataset rationale

When surveyed, interested parties said that the most important topic to them was knowing the “type of building a fire occurred in” through the release of open data. We have reflected this by updating the ‘dwellings’ fire dataset in August and updating the ‘other building’ fires dataset in October, both at the start of the annual round of updates. The Home Office has, and will continue to, engaged with stakeholders, such as statistical users and FRSs, to gauge opinion on the most useful datasets to publish.

## Dataset definition

The ‘other building’ fires dataset covers incidents attended by FRSs that were primary fires in buildings other than dwellings in England. The Home Office only has jurisdiction for fire policy in England and therefore has published incident data for England only.

Fires in derelict ‘other buildings’ are only included if they are considered to be a primary fire (i.e. the fire involved a fatality, casualty or rescue or the fire was attended by five or more pumping appliances).

Derelict ‘other buildings’ are defined as those unfit for further use; awaiting demolition or under demolition. These records, when aggregated, match the [published statistics](#) as derelict ‘other buildings’ are only included in the ‘other building’ statistics if they are a primary fire.

The data in this dataset are consistent with records that reached the IRS by 10<sup>th</sup> June 2018.

## 2 Variable by variable – Scene Setting

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Variable Name:	FRS_FULLNAME
Variable Description:	The FRS in which the 'other building' fire took place
IRS Question:	1.6

The Fire and Rescue Service (FRS) refers to the territory in which the incident took place, not necessarily the FRS which responded. Occasionally an FRS will respond to an incident “over the border”, because of this, users should be careful about making general comments about particular FRSs as some incidents may have been attended by other FRSs. This dataset only covers incidents that took place in England.

Due to data protection issues we have merged Isles of Scilly data with Cornwall, as the number of other building fires in Isle of Scilly is minimal [there were 18 between 2010/11 and 2017/18]. Figures for Dorset and Wiltshire, who merged into one FRS on 1<sup>st</sup> April 2016, are presented merged.

Variable Name:	E_CODE
Variable Description:	The E Code of the FRS
IRS Question:	1.6 (based on)

The standard National Statistics code (E Code) of the Fire and Rescue Service (FRS) in FRS\_NAME. In this case the code for Cornwall has been used for the Cornwall and Isles of Scilly combined FRS.

Variable Name:	FINANCIAL_YEAR
Variable Description:	The financial year the 'other building' fire took place
IRS Question:	2.1 (based on)

A financial year runs from 1 April to 31 March. Record level information is published from 2010/11 - although the IRS began in April 2009 there are a few minor issues with the 2009/10 records which mean that while statistics at higher levels are robust, some of the incident level records are not of a sufficient quality to publish. Incidents are allocated to financial year depending on the time of the call, which is usually collected through automatic systems, so for example an incident where the call was made at 23.59 on March 31<sup>st</sup> 2010 but the incident was closed at 01.34 on April 1<sup>st</sup> 2010 would be allocated to 2009/10 not 2010/11.

Variable Name:	DAY_OF_WEEK
Variable Description:	Which day of the week the 'other building' fire took place
IRS Question:	2.1 (based on)

Incidents are allocated to this variable depending on the time of the call, which is usually collected through automatic systems.

Variable Name:	DAY_NIGHT
Variable Description:	Whether the incident took place in day or night
IRS Question:	2.1 (based on)

Incidents are allocated to this variable depending on the time of the call, which is usually collected through automatic systems. "Night" is defined as starting at midnight and running until 6am, "Morning" runs from 6am to midday, "Afternoon" from midday to 6pm and "Evening" from 6pm to midnight.

### 3 Variable by variable - Situation

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Variable Name:	BUILDING_TYPE
Variable Description:	The type of building the fire was in
IRS Question:	3.2

The 'other building' fires dataset only covers primary fires, this excludes derelict buildings unless five or more pumping appliances attended the incident or it resulted in a fatality, casualty or rescue. Some categories have been combined for personal data reasons and others for ease of use.

Variable Name:	FSO_APPLY
Variable Description:	Whether the Regulatory Reform (Fire Safety) Order 2005 ("the 'FSO'") applies
IRS Question:	5.5

The FSO applies to virtually all non-domestic premises and covers nearly every type of commercial building, structure and open space to which the public have access. It does not apply to people's private homes, including individual flats in a block or house. However, the FSO applies should the fire spread to shared areas or the fire causes the people from neighbouring flats to evacuate.

Variable Name:	OCCUPIED_TIME
Variable Description:	Whether the building was occupied at the time of the fire
IRS Question:	5.13

If persons were not in the building where the incident started, but were in a building to which the fire spread, they would be included here.

Variable Name:	OCCUPIED_NORMAL
Variable Description:	Whether the building was normally occupied
IRS Question:	5.14

This would include squatters and non-rightful occupants.

Variable Name:	ALARM_SYSTEM
Variable Description:	Whether a smoke alarm was present and if it operated.
IRS Question:	Combination of 5.8 and 5.11

In a case where more than one alarm system was present, the "best" case is chosen, i.e. "Alarm Present and raised the alarm" is the best case, "Alarm Present but did not raise alarm" is the second best case, "Alarm Present but did not operate" is the third best case and "Alarm Absent" is the worst case.

Variable Name:	SAFETY_SYSTEM
Variable Description:	Whether a safety system was present and if it operated.
IRS Question:	7.11, 7.12 and 7.14

In a case where more than one safety system was present, the “best” case is chosen. Safety systems are separately listed as sprinklers and other systems.

Variable Name:	IGNITION_TO_DISCOVERY
Variable Description:	The time between ignition and discovery
IRS Question:	5.2

This is the approximate time elapsed from the ignition of the fire to its discovery and may well be estimated.

When the ‘other building’ fire spreads from a secondary fire, the time is based on the estimated start of first damage to the building. For example, if a rubbish bin fire (secondary) spreads to a building (primary) the time recorded is the estimated time from ignition of the building to discovery NOT ignition of the bin to discovery.

Variable Name:	DISCOVERY_TO_CALL
Variable Description:	The time between discovery and call.
IRS Question:	5.3

This is the approximate time elapsed from the discovery of the fire to when the call was made to the emergency services and may well be estimated (FRSs are asked to provide an estimate if at all possible).

Variable Name:	LATE_CALL
Variable Description:	Whether the incident was a late call
IRS Question:	2.4

A late call is where a fire is known to be extinguished when the call was made.

It should be stressed that a fire that is ‘out on arrival’ (for example, extinguished before the FRS arrived) does not constitute a ‘late fire call’. A fire which comes to the attention of the FRS to which no call was made, for example as a result of a press report or inquest, is reported as a late call if an attendance is made (even if one person attends for inspection only) but is not included if no attendance is made.

## 4 Variable by variable – The Fire

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Variable Name:	ACCIDENTAL_OR_DELIBERATE
Variable Description:	Whether the incident was recorded as an accidental or deliberate fire
IRS Question:	5.15

A deliberate fire is a fire believed to have been started deliberately such as suspected arson and some fires started by children, psychiatric patients, suicides and attempted suicides. Accidental fires include those where the motive was recorded as “not known”. Whilst we would not expect the fires for “deliberate fires” to match precisely the [published figures for arson](#) in the tables from the Crime in England and Wales statistical release, we would expect deliberate fires for dwellings, ‘other buildings’ and vehicles to be similar to the arson figures.

Variable Name:	CAUSE_OF_FIRE
Variable Description:	The main cause of the fire
IRS Question:	8.1

This variable contains options that best describe the main cause of the fire. FRSs are not necessarily certain that the fire was due to the cause given, only that the cause was one that could be reasonably supposed, given the evidence available. The cause may change as more evidence through a fire investigation becomes available.

Variable Name:	IGNITION_POWER
Variable Description:	What powered the ignition of the fire
IRS Question:	8.5

This variable contains options that best describe the main source of the ignition’s power. It is not necessary to be certain that the fire was due to the power given, only that the power was one that could be reasonably supposed, given the evidence available. The ignition power may change as more evidence through a fire investigation becomes available.

Variable Name:	SOURCE_OF_IGNITION
Variable Description:	The source of ignition for the fire
IRS Question:	8.4

This variable contains options that best describe the source of ignition for the fire. FRSs are not necessarily certain what the source of ignition for the fire is, only that the source of ignition was one that could be reasonably supposed, given the evidence available. The source of ignition may change as more evidence through a fire investigation becomes available.

Variable Name:	
Variable Description:	The type of room/compartment the fire started in
IRS Question:	8.14

This variable contains options that best describe the room or compartment where the fire started.

Variable Description:	The extent of fire on the FRS's arrival
IRS Question:	8.20

This variable contains options that best describe of the extent of the fire when the first fire crew arrived.

Variable Description:	Whether an adjacent property was affected by the fire on the FRS's arrival
IRS Question:	8.21

Whether an adjacent property was affected, when the first fire crew arrived, by either flame and heat, flame and smoke or flame, heat and smoke damage.

Variable Name:	ITEM_IGNITED
Variable Description:	The item/material that was ignited first
IRS Question:	8.6

This variable contains options that best (or most likely) describe the item first ignited. The item cannot be the same as the source of ignition and doesn't include items that were ignited in the normal course of events (for example a cigarette, a match etc.)

If the fire was a spread from a secondary fire, the primary location that was damaged first should be recorded. For example, if the source of ignition was a bonfire burning leaves which spread to a building, then the item first ignited was the building, not the waste leaves on the bonfire.

Variable Name:	ITEM_CAUSING_SPREAD
Variable Description:	The item/material that was mainly responsible for the spread of the fire
IRS Question:	8.7

This variable contains options that best (or most likely) describe the item mainly responsible for causing the spread of the fire.



Variable Name:	RAPID_FIRE_GROWTH
Variable Description:	Whether there was rapid fire growth
IRS Question:	8.8

Whether there was rapid fire growth or not.

## 5 Variable by Variable - Resourcing

Variable Name:	VEHICLES
Variable Description:	The number of fire service vehicles that attended the incident
IRS Question:	6.2

The total number of FRS vehicles that attended the incident. This includes all types of vehicle, for example hazardous materials units, fire boats and canteen vans would also be included in this total. Large numbers are grouped for ease of use and to reduce the personal data risk of incidents being matched across datasets. For example, there are likely to be few incidents attended by 47 vehicles and this could be matched to other datasets containing this variable but grouping these in the “15 or more” grouping makes this impossible.

Variable Name:	VEHICLES_CODE
Variable Description:	A code to help users analyse data
IRS Question:	6.2

Because some of the options in the vehicles variable contains letters (e.g. 15 or more) this code has been added after feedback from users to aid analysis.

Variable Name:	PERSONNEL
Variable Description:	The number of fire crew and officers that attended the incident
IRS Question:	Combination of 6.1 and 6.4

The number of FRS personnel that attended the incident on fire service appliances or by other means (e.g. their own vehicle, on foot). Large numbers of personnel are grouped for ease of use and to reduce the personal data risk of incidents being matched across datasets. For example, there are likely to be few incidents attended by 147 officers and this could be matched to other datasets containing this variable but grouping these in the “40 or more” grouping makes this impossible.

Variable Name:	PERSONNEL_CODE
Variable Description:	A code to help users analyse data
IRS Question:	6.2

Because some of the options in the personnel variable contains letters (e.g. 40 or more) this code has been added after feedback from users to aid analysis.

Variable Name:	RESPONSE_TIME
Variable Description:	The time between the call being made and the first fire vehicle attending the scene
IRS Question:	Combination of 2.1 and 6.8

The time of the call is defined as when first call was received by Command & Control. If the call was received by one FRS and relayed to another, then the time of the call to the first FRS is used. Both of these variables are usually collected through automatic systems.

Variable Name:	RESPONSE_TIME_CODE
Variable Description:	A code to help users analyse data
IRS Question:	Combination of 2.1 and 6.8

Because all of the options in the response time variable contains letters (e.g. 1-2 mins) this code has been added after feedback from users to aid analysis.

Variable Name:	TIME_AT_SCENE
Variable Description:	The time between the first fire vehicle attending the scene and the incident being closed.
IRS Question:	Combination of 6.8 and 2.6

An incident is closed when the last FRS appliance, vehicle or officer left the scene of the incident. Both of these variables are usually collected through automatic systems.

Variable Name:	TIME_AT_SCENE_CODE
Variable Description:	A code to help users analyse data
IRS Question:	Combination of 6.8 and 2.6

Because all of the options in the time at scene variable contains letters (e.g. 0-15 mins) this code has been added after feedback from users to aid analysis.

## 6 Variable by Variable - Outcomes

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Variable Name:	FATALITY_CASUALTY
Variable Description:	Whether the incident involved a fatality or casualty
IRS Question:	Combination of 9.6 and 9.21

This records whether the incident involved at least one fire-related fatality or one casualty from the fire. At this early stage of publishing this incident level information no more detailed information on casualties and fatalities is given

To be consistent with published statistics, the variable combines “fire-related fatality” and “non-fatal casualty” (whether fire-related or not). Where “don’t know” is recorded for whether a fatality is fire-related, it is included in the fire-related totals. In general, ‘fire-related fatalities’ are those that would not have occurred had there not been a fire. Casualties include those with injuries requiring hospital attention, those requiring first aid at the scene and those given advice to have precautionary checks (whether they then take that advice or not).

Variable Name:	RESCUES
Variable Description:	The number of people rescued from the building
IRS Question:	9.13

A rescue is where a person has received physical assistance to get clear of the area involved in the incident. A baby carried out in the course of another person’s escape is not included as a rescue, however if a rescuer (including FRS personnel) entered the building or other area affected by the fire in order to rescue the baby, then the baby is recorded as a rescue.

A removal of a fatality is not recorded as a rescue, except where a rescue took place in circumstances which might have resulted in a life being saved even if the person did not survive the rescue attempt.

Where “don’t know” is recorded for whether a rescue occurred, it is not included in this variable.

Variable Name:	EVACUATIONS
Variable Description:	The number of people evacuated from the building
IRS Question:	9.3

An evacuation is the direction of people from a dangerous place to somewhere safe. This variable is the number of people who were evacuated from the incident, unharmed but with assistance from FRS personnel. Those who are rescued or rescued with an injury are not included in those that are evacuated from the incident.

For evacuations from fires attended by FRSs, the IRS records how many there were in eight separate bands (e.g. 6-20 means there were between 6 and 20 evacuations from a fire, 21-50 means between 21 and 50 evacuations).

Variable Name:	EVACUATIONS_CODE
Variable Description:	A code to help users analyse data
IRS Question:	9.3

Because all of the options in the evacuations variable contains letters (e.g. Up to 5) this code has been added after feedback from users to aid analysis.

Variable Description:	The total horizontal area damaged by the flame and heat (sq. m) at the stop of the fire.
IRS Question:	8.24

The total horizontal area damaged by the flame and/or heat (in square metres) at the stop of the fire.

Where an incident was due to fire spread, the extent of all the area affected is included. Where both the floor and ceiling are damaged in a room, only that which had the greater amount of damage is included. The total aggregate of all horizontal damage is recorded, e.g. if three floors are damaged, the total area is given. Vertical surfaces (e.g. walls) that were damaged in the fire are not included, but the horizontal area occupied by damaged contents is included.

Where the horizontal area damaged was zero, this includes where damage was confined to vertical surfaces. A very small area would be included in 'up to 5 metres squared'.

Variable Name:	FIRE_DAMAGE_EXTENT_CODE
Variable Description:	A code to help users analyse data
IRS Question:	8.24

As some of the options in the fire damage extent variable contain letters (e.g. 'up to 5 metres'), this code has been added after feedback from users to aid analysis.

Variable Description:	The total horizontal area damaged by the flame, heat, smoke and water (sq. m)
IRS Question:	8.25

The total horizontal area damaged by the flame, heat, smoke and/or water (in square metres) at the stop of the fire.

Where an incident was due to fire spread, the extent of all the area affected is included. Where both the floor and ceiling are damaged in a room, only that which had the greater amount of damage is included. The total aggregate of all horizontal

damage is recorded, e.g. if three floors damaged, the total area is given. Vertical surfaces (e.g. walls) that were damaged in the fire are not included, but the horizontal area occupied by damaged contents is included.

Where the horizontal area damaged was zero, this includes where damage was confined to vertical surfaces. A very small area would be included in 'up to 5 metres squared'.

Variable Name:	TOTAL_DAMAGE_EXTENT_CODE
Variable Description:	A code to help users analyse data
IRS Question:	8.25

As some of the options in the total damage extent variable contain letters (e.g. 'up to 5 metres'), this code has been added after feedback from users to aid analysis.

Variable Description:	The extent of fire when the incident was closed
IRS Question:	8.22

This variable contains options that best describe of the extent of the fire and heat damage once the incident was closed.

Variable Description:	Whether an adjacent property was affected by the fire by the stop of the fire
IRS Question:	8.23

Whether an adjacent property was affected, when the incident was declared closed, by either flame and heat, flame and smoke or flame, heat and smoke damage.

## 7 Summary Statistics

The number of 'other building' fires in England decreased by 25 per cent between 2010/11 and 2017/18. The table below shows the number of 'other building' fires by FRS over the time covered by this release.

FRS_NAME	E_CODE	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
<b>England</b>	<b>E92000001</b>	<b>20,762</b>	<b>20,335</b>	<b>16,506</b>	<b>16,523</b>	<b>15,560</b>	<b>16,024</b>	<b>15,859</b>	<b>15,577</b>
Avon	E31000001	422	402	307	346	313	367	316	275
Bedfordshire	E31000002	291	282	223	236	189	195	201	174
Berkshire	E31000003	315	255	216	236	204	209	173	186
Buckinghamshire	E31000004	334	338	248	289	241	243	248	208
Cambridgeshire	E31000005	292	271	211	207	195	233	232	229
Cheshire	E31000006	317	350	241	258	259	237	253	252
Cleveland	E31000007	158	177	148	150	154	137	157	149
Cornwall and Isles of Scilly	E31000008	185	191	194	168	175	161	163	183
Cumbria	E31000009	181	195	185	191	152	156	143	157
Derbyshire	E31000010	384	388	263	297	268	266	289	266
Devon and Somerset	E31000011	623	653	535	497	543	488	502	456
Dorset and Wiltshire	E31000047	481	463	409	415	408	414	420	436
Durham	E31000013	293	255	212	227	206	223	202	210
East Sussex	E31000014	298	294	265	251	269	246	259	228
Essex	E31000015	560	571	437	458	435	397	454	424
Gloucestershire	E31000016	211	210	160	206	179	170	163	143
Greater Manchester	E31000040	1,470	1,377	1,116	974	925	1,016	995	1,032
Hampshire	E31000017	482	439	385	365	315	418	389	375
Hereford and Worcester	E31000018	324	343	236	268	206	278	254	239
Hertfordshire	E31000019	337	340	247	244	222	242	222	270
Humberside	E31000020	423	439	343	377	319	329	319	339
Isle Of Wight	E31000021	64	67	49	36	46	65	41	41
Kent	E31000022	504	522	367	421	361	441	486	410
Lancashire	E31000023	748	650	508	553	518	521	491	508
Leicestershire	E31000024	357	343	264	254	268	308	268	255
Lincolnshire	E31000025	341	339	271	272	286	279	275	270
London	E31000046	3,093	2,988	2,660	2,566	2,305	2,435	2,289	2,325
Merseyside	E31000041	653	608	475	449	408	417	428	387
Norfolk	E31000026	304	352	291	330	323	292	289	303
North Yorkshire	E31000027	336	335	310	306	284	277	239	255
Northamptonshire	E31000028	297	247	218	226	204	205	210	223
Northumberland	E31000029	161	153	139	107	143	137	115	126
Nottinghamshire	E31000030	506	483	333	401	358	400	369	340
Oxfordshire	E31000031	254	246	199	204	190	187	165	186
Shropshire	E31000032	215	195	160	168	184	167	145	141
South Yorkshire	E31000042	510	547	426	468	412	403	475	459
Staffordshire	E31000033	444	424	362	377	429	435	412	382
Suffolk	E31000034	288	261	194	209	188	190	215	180
Surrey	E31000035	359	350	313	319	322	323	326	323
Tyne and Wear	E31000043	476	479	364	345	349	349	313	358
Warwickshire	E31000036	210	158	126	109	95	121	101	128
West Midlands	E31000044	1,121	1,239	969	865	876	810	850	858
West Sussex	E31000037	275	269	285	216	232	207	238	222
West Yorkshire	E31000045	865	847	642	662	602	630	765	666



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