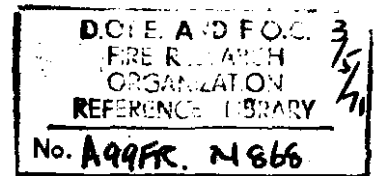


LIBRARY REFERENCE ONLY



Fire Research Note No 868

PRELIMINARY ANALYSIS OF FIRE REPORTS
FROM FIRE BRIGADES IN THE UNITED KINGDOM,
1970

by

S. E. CHANDLER

April 1971

FIRE RESEARCH STATION

RESEARCH

**Fire Research Station,
Borehamwood,
Herts.
Tel. 01-953-6177**

F.R. Note No. 868.
April, 1971.

PRELIMINARY ANALYSIS OF FIRE REPORTS FROM
FIRE BRIGADES IN THE UNITED KINGDOM, 1970

by

S. E. Chandler

SUMMARY

A preliminary analysis shows that 267 226 fires were attended by fire brigades in the United Kingdom in 1970. This figure is the highest ever. Fatal casualties numbered 758 of which three were fire brigade personnel.

KEY WORDS: Fire statistics, casualties.

Crown copyright

This report has not been published and should be considered as confidential advance information. No reference should be made to it in any publication without the written consent of the Director of Fire Research.

PRELIMINARY ANALYSIS OF FIRE REPORTS FROM
FIRE BRIGADES IN THE UNITED KINGDOM, 1970

by

S. E. Chandler

INTRODUCTION

A preliminary analysis of reports shows that, during 1970, local authority fire brigades attended 237 580 fires in England and Wales, 25 150 in Scotland and 4496 in Northern Ireland. The United Kingdom provisional total of 267 226 is the highest ever, it may, however, be an underestimate because of the combination of industrial action by fire brigades and the postal strike.

The number of incidents attended by each brigade is given in Table 1.

Three firemen in England and Wales were fatally injured at, or on the way to fires. In England and Wales 394 members of the fire services were injured at fires; the corresponding figures for Scotland and Northern Ireland were 37 and 8 respectively.

Fire brigades assisted in the rescue of 717 persons from hazardous situations at fires in England and Wales, 162 in Scotland and 23 in Northern Ireland. At least a further 1441 persons were rescued by other persons in England and Wales; the corresponding figures for Scotland and Northern Ireland were 159 and 79 respectively. At least four hundred and seventy four people in England and Wales escaped from fires by unorthodox routes. There were 49 such escapes in Scotland and 20 in Northern Ireland. It is also known that at least 409 persons in England and Wales escaped by normal means (e.g. front door) - the corresponding figures for Scotland and Northern Ireland were 22 and 56 respectively. Further details of casualties, rescues and escapes (other than those escaping by normal means) are given in Tables 2, 3 and 4.

There were four reported mass evacuations, one in England and Wales and 3 in Scotland. The incident in England and Wales involved a bingo hall (120 persons): the Scottish incidents included two hospitals.

This analysis is based on reports received up to 25th March 1971. All figures quoted may be subject to revision.

Table 1

Fires attended by Fire Brigades
in the United Kingdom, 1970

Fire Brigades.	Total fires	Total fires reported on Form K433 (1)	Total fires reported on Form K433H (2)
<u>England and Wales - County Fire Brigade</u>			
Anglesey	231	108	123
Bedfordshire	992	609	383
Berks and Reading	1999	1005 (3)	994
Brecon Co. and Radnor	172	138	34
Buckinghamshire	2140	1061 (4)	1079 (4)
Gaernarvonshire	419	200 (3)	219
Cambridgeshire and Ely Isle of	1089	713	376
Cardiganshire and Carmarthenshire	601	413	188
Cheshire	4643	2236	2407
Cornwall	1004	630	374
Cumberland	858	477	381
Denbigh and Montgomery	742	455	287
Derbyshire	2292	1088	1204 (5)
Devonshire	1060	638 (6)	422 (6)
Dorsetshire	1508	616	892
Durham Co.	3278	1416	1862
Essex	5313	2206	3107
Flintshire	634	316	318
Glamorganshire	2456	1300	1156
Gloucestershire	1570	1020	550
Hampshire	3898	1608	2290
Herefordshire	462	352	110
Hertfordshire	3337	1559 (3)	1778 (3)
Huntingdonshire and Peterborough	578	336 (6)	242 (6)
Kent and Canterbury	5811	2705	3106
Lancashire	11 921	4841 (3)	7080 (3)
Leicestershire and Rutland	1537	775	762
Lincs. (Holland)	291	199	92
Lincs. (Kesteven)	496	296	200
Lincs. (Lindsey)	1326	770	556 (3)
London	48 091	18 717	29 374 (4)
Merionethshire	106	90	16
Monmouthshire	1019	555 (4)	464 (4)
Norfolk	1538	839	699
Northamptonshire	1126	686	440
Northumberland	2143	1070	1073
Nottinghamshire	3053	1044	2009
Oxfordshire	603	407 (3)	196
Pembrokeshire	350	225	125

Table 1 (cont'd)

Fires attended by Fire Brigades
in the United Kingdom, 1970

Fire Brigades	Total fires	Total fires reported on Form K433 (1)	Total fires reported on Form K433H (2)
<u>County Fire Brigades (cont'd)</u>			
Shropshire	1061	671	390
Somerset	1282	921	361
Staffordshire	2602	1234 (4)	1368 (5)
Suffolk(East) Suffolk(West) and Ipswich	1971	848 (5)	1123
Surrey	3639	1463 (4)	2176
Sussex East	1282	735	547 (4)
Sussex West	1391	914	477
Warwickshire	2293	1071 (4)	1222
Westmorland	238	190	48
Wight. Isle of	278	174	104 (4)
Wiltshire	1253	869	384
Worcester Co. and Worcs. C.B.	1682	931	751
Yorks (East Riding)	553	401	152
Yorks (North Riding)	1061	603	458
Yorks (West Riding)	7455	3234	4221
<u>England and Wales - County Borough Fire Brigades</u>			
Barnsley	356	125	231
Barrow in Furness	326	129	197
Bath	372	186	186
Birkenhead	1462	402	1060
Birmingham	5660	2490	3170
Blackburn	896	332	564
Blackpool	744	456	288 (4)
Bolton	1095	501	594
Bootle	1129	273	856
Bournemouth	764	305	459
Bradford	1832	769	1063
Brighton	694	332 (3)	362
Bristol	2074	951	1123
Burnley	794	284	510
Burton on Trent	187	95	92 (3)
Bury	679	226	453
Cardiff	1464	579 (4)	885
Carlisle	352	211	141
Chester	473	245	228
Coventry	1854	790	1064
Darlington	548	229	319
Derby	952	453	499
Dewsbury	485	147	338
Doncaster	540	216	324
Dudley	742	278	464

Table 1 (cont'd)

Fires attended by Fire Brigades
in the United Kingdom, 1970

Fire Brigades	Total fires	Total fires reported on Form K433 (1)	Total fires reported on Form K433H (2)
<u>County Borough Fire Brigades (cont'd)</u>			
Eastbourne	292	126	166
Exeter	403	217	186
Gloucester	270	175	95
Great Yarmouth	279	114	165
Grimsby	944	309	635
Halifax	556	267	289
Hartlepool	827	335	492
Hastings	250	129	121
Huddersfield	672	316	356
Kingston upon Hull	2752	934	1818
Leeds	3154	1167	1987
Leicester	1302	561	741 (3)
Lincoln	503	152	351
Liverpool	8407	2397 (4)	6010
Luton	700	306	394
Manchester	5436	1853 (4)	3583 (4)
Merthyr Tydfil	151	104	47
Newcastle on Tyne and Gateshead	2876	1043	1833
Newport (Mon.)	600	326	274
Northampton	460	233	227
Norwich	740	332	408
Nottingham	2143	783	1360
Oldham	868	458	410 (3)
Oxford	417	272	145
Plymouth	1248	551	697
Portsmouth	724	473 (4)	251 (7)
Preston	808	307	501
Rochdale	696	327	369
Rotherham	753	320	433
St. Helens	1080	362	718
Salford	1830	472 (4)	1358 (4)
Sheffield	2681	1083	1598
Solihull	286	145	141
Southampton	1489	496	993
Southend	519	288	231
Southport	339	188	151
South Shields	748	252	496
Stockport	1798	348 (4)	450 (4)
Stoke on Trent	1113	487	626
Sunderland	1391	497	894
Swansea	714	386	328

Table 1 (cont'd)

Fires attended by Fire Brigades
in the United Kingdom, 1970

Fire Brigades	Total fires	Total fires reported on form K433 (1)	Total fires reported on Form K433H (2)
<u>County Borough Fire Brigades (cont'd)</u>			
Tees-side	2704	1339	1365
Tynemouth	530	176	354
Wakefield	276	123	153
Wallasey	787	331	456
Walsall	1070	347	723
Warley	860	377	483
Warrington	636	249	387
West Bromwich	1051	380	671
Wigan	709	390	319 (4)
Wolverhampton	1036	480	556
York	500	231	269
Total number of fires attended in England and Wales	237 580	103 296	134 284

Fire Brigades	Total fires	Total fires reported on Form K433 (1)	Total fires reported on Form K433H (2)
<u>Scotland</u>			
Glasgow	6835	2696 (4)	4139 (8)
Lanark	3033	1587	1466
Central	2518	1197	1321
Western	2008	1089	919
South Western	1528	990 (4)	538
South Eastern	3632	1962	1670
Fife	1626	756	870
Perth and Kinross	481	317	164 (4)
Angus	1570	767	803 (4)
North Eastern	1377	837	540
Northern	522	350	172
Total number of fires attended in Scotland	25 150	12 548	12 602

Table 1 (cont'd)

Fires attended by Fire Brigades
in the United Kingdom, 1970

Fire Brigades	Total fires	Total fires reported on Form K433 (1)	Total fires reported on Form K433H (2)
<u>Northern Ireland</u> (9)			
North	677	469 (5)	208 (6)
South	1058	720	338
West	587	394 (5)	193 (3)
Belfast	2174	1265	909
Total number of fires attended in Northern Ireland	4496	2848	1648

- (1) Fires reported on K433 include all fires except those confined to derelict buildings, buildings under demolition, grassland, heathland, railway embankments, stubble, single trees, refuse, fences, lamp standards, road furniture, road surfaces, verges and telegraph poles. Because of industrial action no incidents after 16. 12. 70 are included in some brigades. The figures are adjusted for blank call numbers and fires transferred by mutual agreement to category K433H (see note (2)).
- (2) Fires reported on K433H are small fires not reported on K433. Again adjustments are made for blanks and fires transferred to/from category K433.
- (3) Date of last report received 31. 10. 70.
- (4) Date of last report received 30. 11. 70.
- (5) Date of last report received 30. 9. 70.
- (6) Date of last report received 31. 8. 70.
- (7) Date of last report received 31. 5. 70.
- (8) The last numbered report received was 4055. Unnumbered reports have been numbered subsequently by the Fire Research Station.
- (9) It is possible that some fires attributable to civil disturbances were not attended and not reported by these brigades.

Table 2

Nature of injuries of casualties in fires

Casualties	England and Wales			Scotland			Northern Ireland		
	Fire brigade	Other casualties	Total	Fire brigade	Other casualties	Total	Fire brigade	Other casualties	Total
FATAL CASUALTIES¹									
Burns and scalds	2	306	308	-	33	33	-	4	-
Overcome by gas or smoke	-	299	299	-	52	52	-	7	7
Other and undefined injuries	1	50	51	-	4	4	-	-	-
Total	3	655	658	-	89	89	-	11	11
NON FATAL CASUALTIES									
Burns and scalds	69	2570	2639	6	202	208	-	43	43
Bruises, cuts, abrasions	148	271	419	18	20	38	3	11	14
Dislocations, sprains, fractures	31	36	67	1	4	5	1	-	1
Overcome by gas or smoke	65	524	589	5	81	86	1	8	9
More than one of the above injuries	10	85	95	1	8	9	-	1	1
Shock ²	2	519	521	-	54	54	-	16	16
Other and undefined injuries	66	118	184	6	10	16	3	4	7
Total	391	4123	4514	37	379	416	8	83	91
T O T A L	394	4778	5172	37	468	505	8	94	102

1. Casualties who are certified as having died from "Burns and asphyxiation" are included under "Overcome by gas or smoke".

2. Casualties who suffer shock in addition to another injury are classified according to the other injury.

Table 3

Sex and age of fatal casualties in the United Kingdom

Age (years)	Total	Male	Female	Not stated
Under 1	23	11	12	-
1 - 4	96	52	44	-
5 - 14	32	21	11	-
15 - 44	135	101	34	-
45 - 64	139	79	60	-
65 - 74	112	60	52	-
75 and over	197	68	129	-
Not stated, unknown	24	17	-	7
Total	758	409	342	7

Table 4

Persons rescued or escaped by emergency means from fires
attended by fire brigades in the United Kingdom, 1970

Appliances or methods used	Number of persons			
	United Kingdom	England and Wales	Scotland	Northern Ireland
Rescue with fire brigade assistance from Buildings				
Automatic escape lines	3	3	-	-
Escape (hand operated)	94	68	18	8
Ladder: extension	153	138	12	3
first floor	58	49	9	-
hook	4	4	-	-
scaling	1	1	-	-
turntable	17	9	8	-
other or undefined	97	72	25	-
Ladder and line	2	-	2	-
Line	5	5	-	-
Breathing apparatus	10	8	2	-
Other apparatus	23	14	7	2
Without apparatus	421	334	77	10
Road vehicles	11	10	1	-
Ships	1	-	1	-
Other specified hazards	2	2	-	-
Total	902	717	162	23
Rescue without fire brigade assistance from Buildings				
Automatic escape lines	-	-	-	-
Carried or assisted out	1199	1023	122	54
Jumping sheet	11	11	-	-
Ladder	186	168	12	6
Lowered from windows, roof etc.	95	75	12	8
Other or undefined methods	75	66 (1)	5	4
Road vehicles	43	33	8	2
Caravans	14	14	-	-
Ships	7	2	-	5
Other specified hazards	49	49	-	-
Total	1679	1441	159	79

Table 4 (cont'd)

Persons rescued or escaped by emergency means from fires
attended by fire brigades in the United Kingdom, 1969

Appliances or methods used	Number of persons			
	United Kingdom	England and Wales	Scotland	Northern Ireland
Escape by emergency means from Aircraft				
Baled out	4	4	-	-
Through exits or from debris	4	-	-	4
Thrown clear	5	5	-	-
Method not stated	5	5	-	-
Buildings				
Automatic escape lines	1	1	-	-
Climbing over roof, window ledges etc.	5	5	-	-
Fixed fire escape	9	9	-	-
Jumping from upstairs window, roof etc.	168	150	13	5
Ladder	25	21	1	3
Sliding down drainpipe, sheets etc.	22	18	4	-
Through ground floor windows	31	25	6	-
Other or undefined methods	147	138	5	4
Road vehicles	52	40(2)	8	4
Caravans	14	14	-	-
Ships	26	25(2)	1	-
Railway locomotive	2	2	-	-
Other specified hazards	23	12	11	-
Total	543	474	49	20
Total persons rescued or escaped	3124	2632	370	122

(1) Two incidents not included in which an unknown No. of persons was involved.

(2) One incident not included in which an unknown No. of persons was involved.

