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LARGE FIRES DURING 1971

by

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FIRE RESEARCH STATION

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SUMMARY

This note contains an analysis of large fires which occurred during 1971. These are defined as fires which are estimated to have cost £10,000 or more in direct damage. There were 1252 such fires during 1971 resulting in a total loss of £81.9 million. Of these, 51 started in outdoor hazards, some of which spread to buildings.

KEY WORDS: Large, fire, loss, fire statistics.

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INTRODUCTION

This note is one of a series produced to give a continuing statistical record of large fire losses. The tables provided have been compiled from reports furnished by local authority fire brigades and from data on financial losses received from insurance sources through the Fire Protection Association. Tables 1 to 10 with suffix A and Table 11 relate to fires in buildings, and those with suffix B to fires in outdoor hazards. Some of the outdoor fires spread to buildings. In Tables 12 to 15 these two groups have been consolidated and the figures relate to all of the fires, whether in buildings or in outdoor hazards.

General observations

During 1971 there were 1252 fires in the United Kingdom each estimated to have cost £10,000 or more in direct damage. The direct material damage in all these fires amounted to £81.9 million out of an estimated total of £128.7 million in all fires during that year. Large fires thus accounted for 63.6 per cent of the estimated total direct material loss compared with 63.0 per cent in 1970 and 65.2 per cent in 1969.

There was a sharp increase in the number of large fires that started in buildings from 1040 in 1970 to 1201 in 1971. The average loss in these fires in 1971 was also higher than the average for 1970. On the other hand the number of large fires that started in outdoor hazards dropped from 75 in 1970 to a figure of 51 in 1971. There was also a significant decrease in the average loss in outdoor fires, but this was again higher than the average for the fires that started in buildings.

Table 1A

Large fire losses (in buildings)

Size group (£ thousands)	Number of fires	Total damage (£ thousands)
Total	1 201	77 697
10 to 15	358	4 395
16 to 20	171	3 116
21 to 25	104	2 444
26 to 30	64	1 835
31 to 35	70	2 359
36 to 40	55	2 149
41 to 50	72	3 372
51 to 75	91	5 728
76 to 100	66	5 952
101 to 150	55	6 879
151 to 200	26	4 484
201 to 250	16	3 680
251 to 500	35	12 567
501 to 1000	15	11 227
Over 1000	3	7 510

Table 1B

Large fire losses (not in buildings)

Size group (£ thousands)	Number of fires	Total damage (£ thousands)
Total	51	4 224
10 to 20	26	377
21 to 50	11	414
51 to 100	6	434
101 to 150	-	-
151 to 200	2	383
201 to 500	5	1 616
501 to 1000	1	1 000

Table 2A

Large fires in relation to hazard (in building)

Hazard	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
Agriculture, Forestry, Fishing	51	1 195	23.4
<u>Industrial premises</u>	565	43 733	77.4
Mining and quarrying	4	1 276	319.0
Food, drink and tobacco	45	2 924	64.9
Coal and petroleum products	3	1 061	353.7
Chemical and allied industries	52	3 248	62.5
Metal manufacture	42	1 694	40.3
Mechanical engineering	26	1 011	38.9
Instrument engineering	5	144	28.8
Electrical engineering	32	3 258	101.8
Shipbuilding and marine engineering	7	226	32.3
Vehicles	27	1 791	66.3
Metal goods not elsewhere specified	28	1 085	38.7
Textiles	95	13 154	138.5
Leather, leather goods and fur	7	237	33.8
Clothing and footwear	39	2 343	60.1
Bricks, pottery, glass, cement etc.	22	1 524	69.3
Timber, furniture etc.	40	1 457	36.4
Paper, printing and publishing	43	4 604	107.1
Other manufacturing industries	32	1 809	56.5
Construction	16	887	55.3
<u>Public utilities</u>	64	8 582	134.1
Gas	2	45	22.5
Electricity	16	1 581	98.8
Transport and communication	46	6 956	151.2
<u>Distributive trades</u>	193	11 461	59.4
Wholesale	46	4 129	89.8
Retail	114	4 644	40.7
Other dealers	33	2 688	81.5
<u>Other non-private occupancies</u>	288	11 708	40.6
Insurance, banking, finance and business services, professional and scientific services	15	454	30.3
- Education	62	2 200	35.5
- Other	22	964	43.8
Catering, hotel etc.	97	5 033	51.9
Other miscellaneous	70	2 326	33.2
Public administration and defence	22	731	33.2
<u>Private dwellings</u>	28	703	25.1
Private house	22	607	27.6
Private flat	6	96	16.0
Other private occupancies	1	50	50.0
Derelict and unoccupied	1	33	33.0
Unknown occupancies	10	232	23.2

Table 2B

Large fires in relation to hazard (not in buildings)

Hazard	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
Outdoor storage			
- timber	7	331	47.3
- paper, packing materials	7	454	64.8
- other	15	610	40.7
Chemical plant	3	48	16.0
Gas works plant and mains	2	346	173.0
Oil refinery	4	1 770	442.5
Other outdoor plant	5	126	25.2
Other	8	539	67.4

Table 3A
Source of ignition of large fires (in buildings)

Source of ignition	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
Explosives and fireworks	6	1 723	287.2
Malicious ignition, doubtful	176	10 080	57.3
Matches, naked lights, taper etc	16	1 134	70.9
Children with fire	28	888	31.7
Mechanical heat or sparks	18	945	52.5
Smoking materials	55	2 923	53.1
Spontaneous combustion	14	1 113	79.5
<u>Electric appliances and installations</u>	135	8 224	60.9
Cooking appliances	8	218	27.3
Space heating	15	480	32.0
Welding and cutting	5	208	41.6
Lighting	5	551	110.2
Domestic appliances (other)	8	144	18.0
Industrial appliances (other)	31	1 781	57.5
Wire and cable	50	3 487	69.7
Electric (other)	13	1 355	104.2
<u>Gas appliances and installations</u>	16	342	21.4
Industrial oven	7	120	17.1
Other	9	222	24.7
Solid fuel appliances and installations	2	30	15.0
Oil appliances and installations	28	934	33.4
Liquefied petroleum gas appliances and installations	5	177	35.4
Acetylene appliances and installations	16	1 387	86.7
Other known causes	48	1 781	37.1
Unknown causes	638	46 016	72.1

Table 3B

Source of ignition of large fires (not in buildings)

Source of ignition	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
Explosives and bombs	1	75	75.0
Malicious ignition, doubtful	6	449	74.8
Children with fire, e.g. matches	8	213	26.6
Naked light	1	370	370.0
Rubbish burning - other	4	100	25.0
Spontaneous combustion	2	550	275.0
Electric appliances and installations	1	1 000	1000.0
<u>Oil appliances and installations</u>			
Chemical plant equipment	1	10	10.0
Engine - exhaust pipe	1	190	190.0
<u>Acetylene appliances and installations</u>			
Welding and cutting equipment	1	100	100.0
Other known causes	7	179	25.6
Unknown	18	988	54.9

Table 4A

Place of origin of large fires (in buildings)

Place of origin	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
<u>Production and maintenance</u>			
Boiler room, engine room	14	755	53.9
Drying and head treatment	27	1 131	41.9
Paint spraying	17	541	31.8
Welding shop	2	277	138.5
Workshop	36	1 552	43.1
Dust extractor	9	201	23.3
Laboratory, research department	8	533	66.6
Power house, switch gear, generator	7	352	14.0
Transformer	1	250	250.0
Contractors hut	5	192	38.4
Other and unspecified factory section	192	14 548	75.8
<u>Assembly</u>			
Back stage rooms, projection suite	3	246	82.0
Main halls, dance halls	8	876	109.5
Lecture room, class room	13	431	33.2
Lounge, common room	8	210	26.3
Canteen, restaurant	20	994	49.7
Bar	8	175	21.9
Pavilion	1	10	10.0
Place of worship	8	325	40.6
Railway station	1	23	23.0
Circuses, amusements etc.	2	38	19.0
Art gallery, museum, library	2	150	75.0
Other	3	385	128.3
<u>Storage</u>			
Store, stockroom	249	21 991	88.3
Loading bay, packing department	13	1 245	95.8
Shop	25	1 037	41.5
Showroom, display hall	10	613	61.3
Ash pit, refuse room	3	76	25.3
Car park	1	80	80.0
Garage, garage forecourt	4	86	21.5
Unspecified	1	10	10.0
<u>Structure and/or fittings</u>			
Roof space	20	1 428	71.4
Neon lighting	1	15	15.0
External structure	3	65	21.7
Other external fittings	2	60	30.0
<u>Miscellaneous</u>			
Rest room, waiting room	1	10	10.0
Laundry, wash house	1	170	170.0
Animal shed	7	115	16.2
Barn	30	498	16.6
Bedroom	8	162	20.3
Living room and dining room	3	79	26.3
Kitchen	18	582	32.3
Cloakroom, lavatory, bathroom	2	90	45.0
Corridor, hall, stairs	19	477	25.1
Lift	1	20	20.0
Office	39	1 228	31.5
Residential (not stated)	2	47	23.5
Unoccupied sections	4	819	204.7
Signal box	1	23	23.0
Airing cupboard	1	26	26.0
Rear of shop premises	2	28	14.0
Building under construction or demolition	42	1 525	36.3
Unknown	293	20 897	71.3

Table 4B

Place of origin of large fires (not in buildings)

Place of origin	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
<u>Production and maintenance</u>			
Heat treatment section	1	15	15.0
Transformer	1	20	20.0
Other factory section	6	619	103.2
<u>Storage</u>			
Fuel - solid	1	50	50.0
Fuel - liquid	3	1 209	403.0
Fuel - gas	1	100	100.0
Other	1	20	20.0
<u>Miscellaneous</u>			
Cloakroom (on a ship)	1	20	20.0
Farm yard	3	51	17.0
Field	1	12	12.0
Road, grass verge	3	382	127.3
Factory yard goods yard	22	1 139	51.8
Builders yard demolition site	2	203	101.5
Yard (miscellaneous)	4	124	31.0
Building under construction or demolition	1	260	260.0

Table 5A
Spread of large fires (in buildings)

Spread of fire	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
<u>Confined to room of origin</u>			
Confined to appliance where fire started	9	398	44.2
Confined to material first ignited	7	216	30.8
Spread beyond item where fire started but no structure involved	44	1 571	35.7
Structural damage	34	1 480	43.5
<u>Confined to floor of origin</u>	47	1 463	31.1
<u>Confined to building of origin (single compartment)</u>			
Spread beyond item where fire started but no structure involved	1	15	15.0
Structure damaged	11	159	14.6
Building gutted	2	22	11.0
<u>Confined to building of origin (multi-compartment)</u>			
Single storey	217	9 006	41.5
Multi-storey	438	30 921	70.6
Extent unknown	194	9 686	49.9
<u>Extended to:-</u>			
Adjoining buildings	79	6 342	80.3
Separate buildings	54	8 944	165.6
Other hazards	18	1 027	57.1
Adjoining and separate building	10	1 034	103.4
Adjoining building and other hazards	7	754	107.7
Separate buildings and other hazards	24	3 385	141.0
Adjoining and separate buildings and other hazards	5	1 274	254.8

Table 5B

Spread of large fires (not in buildings)

Spread of fire	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
Confined to Hazard of origin	16	1 008	63.0
Extended to Building(s)	24	2 786	116.1
Other hazard(s)	3	73	24.3
Building(s) and other hazard(s)	8	357	44.6

Table 6A

Jets used to extinguish large fires (in buildings)

Number of jets	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1201	77 697	64.7
0	130	5 417	41.7
1	88	2 150	24.4
2	167	5 049	30.2
3	141	5 352	37.9
4	148	5 353	36.2
5	100	4 054	40.5
6	76	5 229	68.8
7	42	3 859	92.1
8	43	2 878	66.9
9	21	2 357	112.2
10	36	5 252	145.8
11	17	2 814	165.5
12	19	3 199	168.4
13	8	1 606	200.8
14	7	1 389	198.4
15 - 19	19	3 253	171.2
20 - 24	8	5 167	645.9
25 - 29	3	2 269	756.3
30 and above	3	4 652	1550.7
Not stated	125	6 388	51.1

Table 6B

Jets used to extinguish large fires (not in building)

Number of jets	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
0	2	293	146.5
1	5	321	64.2
2	12	335	27.9
3	4	156	39.0
4	3	39	13.0
5	5	115	23.0
6	5	158	31.6
7	1	50	50.0
8	2	35	17.5
9	2	25	12.5
10	3	634	211.3
11	-	-	-
12	1	190	190.0
13	-	-	-
14	-	-	-
15 - 19	3	363	121.0
20 - 24	2	1 010	505.0
25 - 29	1	500	500.0
30 and above	-	-	-
Unknown not stated	-	-	-

Table 7A

Date of construction of building involved in large fires

Period of construction	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
Before 1800	40	1 313	32.8
1800 - 1849	24	1 322	55.1
1850 - 1899	189	12 823	67.8
19th century (unspecified)	28	1 593	56.9
1900 - 1914	196	16 643	84.9
1915 - 1918	4	226	56.5
1919 - 1939	138	9 351	67.8
1940 - 1945	26	2 491	95.8
1946 - 1950	59	3 685	62.5
1951 - 1955	34	1 384	40.7
1956 - 1960	75	4 074	54.3
1961 - 1965	75	4 698	62.6
1966 - 1971	89	5 420	60.9
20th century (unspecified)	1	110	110.0
Not known	223	12 564	56.3

Table 7B

Date of construction of buildings to which outdoor fires spread

Period of construction	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
19th century (unspecified)	2	243	121.5
1900 - 1914	6	279	46.5
1915 - 1918	1	18	18.0
1919 - 1939	5	336	67.2
1940 - 1945	1	15	15.0
1946 - 1950	1	23	23.0
1951 - 1955	-	-	-
1956 - 1960	3	289	96.3
1961 - 1965	3	288	96.0
1966 - 1970	11	1 030	93.6
Unknown or no building involved	18	1 703	94.6

Table 8A

Time of call to large fires (in buildings)

Time of call	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
00.00 - 00.59	54	3 795	70.3
01.00 - 01.59	53	2 653	50.1
02.00 - 02.59	57	4 241	74.4
03.00 - 03.59	52	3 052	58.7
04.00 - 04.59	39	2 412	61.8
05.00 - 05.59	29	2 133	73.6
06.00 - 06.59	34	1 925	56.6
07.00 - 07.59	32	3 279	102.5
08.00 - 08.59	26	2 437	93.7
09.00 - 09.59	20	1 049	52.5
10.00 - 10.59	32	1 447	45.2
11.00 - 11.59	24	2 175	90.6
12.00 - 12.59	28	1 621	57.9
13.00 - 13.59	40	1 547	38.7
14.00 - 14.59	55	4 373	79.5
15.00 - 15.59	49	4 924	100.5
16.00 - 16.59	45	5 849	129.9
17.00 - 17.59	41	3 718	90.7
18.00 - 18.59	64	2 778	43.4
19.00 - 19.59	48	2 163	45.1
20.00 - 20.59	52	2 330	44.8
21.00 - 21.59	54	2 526	46.8
22.00 - 22.59	48	2 242	46.7
23.00 - 23.59	55	4 371	79.5
Unknown not stated	170	8 657	50.9

Table 8B

Time of call to large fires (not in building)

Time of call	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
00.00 - 00.59	1	500	500.0
01.00 - 01.59	1	10	10.0
02.00 - 02.59	1	51	51.0
03.00 - 03.59	1	20	20.0
04.00 - 04.59	3	308	102.7
05.00 - 05.59	1	20	20.0
06.00 - 06.59	1	10	10.0
07.00 - 07.59	-	-	-
08.00 - 08.59	2	58	29.0
09.00 - 09.59	-	-	-
10.00 - 10.59	2	208	104.0
11.00 - 11.59	1	1 000	1000.0
12.00 - 12.59	2	275	137.5
13.00 - 13.59	-	-	-
14.00 - 14.59	9	536	59.6
15.00 - 15.59	4	675	168.8
16.00 - 16.59	2	91	45.5
17.00 - 17.59	3	47	15.7
18.00 - 18.59	7	170	24.3
19.00 - 19.59	3	32	10.7
20.00 - 20.59	1	20	20.0
21.00 - 21.59	2	55	27.5
22.00 - 22.59	1	45	45.0
23.00 - 23.59	3	93	31.0

Table 9A

Month in which fires occurred (in buildings)

Month	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
January	96	5 211	54.3
February	97	6 988	72.0
March	120	6 825	56.9
April	87	4 717	54.2
May	93	9 086	97.7
June	106	6 259	59.0
July	80	4 007	50.0
August	102	8 594	84.2
September	98	5 604	57.2
October	104	7 392	71.1
November	111	5 153	46.4
December	107	7 861	73.5

Table 9B

Month in which large fires occurred (not in building)

Month	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
January	-	-	-
February	2	600	300.0
March	7	410	58.6
April	3	79	26.3
May	7	352	50.3
June	4	230	57.5
July	7	1 542	220.3
August	4	175	43.8
September	5	113	22.6
October	7	583	83.3
November	2	32	16.0
December	3	108	36.0

Table 10A

Day of week of large fires (in buildings)

Day of week	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 201	77 697	64.7
Sunday	152	8 188	53.9
Monday	182	12 057	66.2
Tuesday	179	12 787	71.4
Wednesday	182	11 567	63.6
Thursday	158	12 258	77.6
Friday	189	11 255	59.6
Saturday	159	9 585	60.3

Table 10B

Day of week of large fires (not in building)

Day of week	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	51	4 224	82.8
Sunday	10	603	60.3
Monday	3	80	26.6
Tuesday	4	94	23.5
Wednesday	5	565	113.0
Thursday	9	1 735	192.8
Friday	9	330	36.7
Saturday	11	817	74.3

Table 11

Direct loss in manufacturing industries and distributive trades
Loss range (£ thousands)

Hazard	Total		10 - 20		21 - 50		51 - 100		101 - 250		251 - 500		Over 500	
	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)	No. of fires	Total direct loss (£ thousands)
Total	738	53 031	279	3 980	235	7 851	113	8 466	72	10 733	24	8 414	15	13 587
Food, drink and tobacco	45	2 924	20	281	11	368	5	427	6	878	3	970		
Coal and petroleum products	3	1 061	1	11	-	-	-	-	-	-	1	500	1	550
Chemical and allied industries	52	3 248	21	292	15	528	8	630	7	1 296	-	-	1	502
Metal manufacturers	42	1 694	19	253	15	546	6	475	1	120	1	300	-	-
Mechanical engineering	26	1 011	15	219	7	238	1	100	3	454	-	-	-	-
Instrument engineering	5	144	3	44	1	26	1	74	-	-	-	-	-	-
Electrical engineering	32	3 258	11	162	7	230	10	731	2	310	-	-	2	1 825
Shipbuilding and marine engineering	7	226	3	47	3	84	1	95	-	-	-	-	-	-
Vehicles	27	1 791	14	212	8	286	3	206	-	-	1	451	1	636
Metal goods not elsewhere specified	28	1 085	15	214	9	299	1	60	2	256	1	256	-	-
Textiles	95	13 154	30	441	17	566	18	1 282	18	2 644	7	2 378	5	5 843
Leather, leather goods and fur	7	237	4	61	2	71	-	-	1	105	-	-	-	-
Clothing and footwear	39	2 343	10	145	15	496	8	570	5	764	1	368	-	-
Bricks, pottery, glass, cement etc.	22	1 524	6	80	6	156	5	377	4	616	1	295	-	-
Timber, furniture etc.	40	1 457	19	232	13	485	5	387	3	353	-	-	-	-
Paper, printing and publishing	43	4 604	12	176	16	530	5	356	5	746	3	1 035	2	1 761
Other manufacturing industries	32	1 809	5	65	12	378	11	845	4	521	-	-	-	-
Distributive trades - wholesale	46	4 129	10	155	21	749	7	497	4	502	2	748	2	1 478
Distributive trades - retail	114	4 644	46	657	48	1 529	14	1 090	4	627	2	741	-	-
Distributive trades - other dealers	33	2 688	15	233	9	286	4	264	3	541	1	372	1	992

Table 12

Control time of large fires

Control time	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 252	81 921	65.4
Under 10 min	64	1 684	26.3
10 - 19 min	98	2 769	28.3
20 - 29 min	150	4 688	31.3
30 - 39 min	147	5 142	34.9
40 - 49 min	125	4 764	38.1
50 - 59 min	105	5 534	52.7
60 - 69 min	81	8 849	109.2
70 - 79 min	60	4 019	66.9
80 - 89 min	54	3 842	71.1
90 - 99 min	40	6 127	153.2
100 - 109 min	32	2 266	70.8
110 - 119 min	16	1 111	69.4
120 - 179 min	51	8 377	164.3
180 - 239 min	12	5 490	457.5
240 - 299 min	8	2 335	291.9
300 min and over	14	5 241	374.4
Late call	2	55	27.5
Unknown	193	9 628	49.9

Table 13

Behaviour of fire protection devices in large fires

Fire protection devices	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	1 252	81 921	65.4
Detectors			
Operated	11	550	50.0
Did not operate	6	366	61.0
CO ₂ steam			
Operated	7	291	41.6
Did not operate	-	-	-
Roof vents			
Operated	1	13	13.0
Did not operate	-	-	-
Fire doors			
Operated	3	711	237.0
Did not operate	2	45	22.5
Others			
Operated	5	547	109.4
Did not operate	2	121	60.5
Any combination of above			
Operated	3	1 097	365.7
Did not operate	-	-	-
Dry and/or wet riser			
Operated	52	5 196	99.9
Did not operate	15	1 744	116.3
Dry and/or wet riser with other devices (except sprinklers)			
Operated	7	4 901	700.1
Did not operate	1	350	350.0
Sprinklers			
Operated	64	7 499	117.2
Did not operate	21	5 550	264.3
Not installed, unknown or not applicable ⁽¹⁾	1 052	52 940	50.3

(1) Includes 3 sprinkler installations of which action was not stated.

Table 14

Behaviour of sprinklers in large fires

Behaviour of sprinklers	No. of fires	Total direct loss (£ thousands)	Average direct loss per fire (£ thousands)
Total	88	13 306	151.2
<u>Installed but did not operate</u>	21	5 550	264.3
Because insufficient head was generated by fire	3	92	30.7
Because fire was above heads	1	30	30.0
Because system was shut down (bad repair, frost damage, etc)	5	241	48.2
Because seat of fire was away from heads	2	2 834	1417.0
Because system was shut down (no reason given)	7	1 065	152.1
Because of explosion	2	1 258	629.0
Reason unknown or not stated	1	30	30.0
<u>Operated but did not control fire</u>	10	5 195	519.5
Because objects deflected the sprinkler jets from fire	1	23	23.0
Because system was only partly available	2	208	104.0
Reason unknown or not stated	1	10	10.0
Because of insufficient water pressure	2	3 940	1970.0
Rapid spread of fire	2	671	335.0
Seat of fire away from heads or rapid spread of fire	2	343	171.5
Controlled but did not extinguish fire	51	2 219	43.5
Extinguished fire	3	85	28.3
Action not stated	3	257	85.7

Table 15

Casualties in large fires

Hazard	No. of fires with casualties	No. of fatal fires	Non-fatal casualties	Fatal casualties	Average direct loss per fire (£ thousands)
Total	101	12	278	37	12 883
Agriculture and Horticulture	1	0	1	0	20
Industrial premises	41	2	121	3	8 835
Food, drink and tobacco	2	0	10	0	285
Coal and petroleum products	1	0	2	0	500
Chemicals and allied industries	10	1	45	2	815
Metal manufacturers	1	0	1	0	50
Mechanical engineering	1	0	1	0	50
Electrical engineering	1	0	2	0	200
Vehicles	4	0	7	0	587
Metal goods not elsewhere specified	1	0	1	0	19
Textiles	6	1	15	1	4 606
Leather, leather goods	1	0	1	0	105
Clothing and footwear	2	0	3	0	425
Bricks, pottery, glass, cement	2	0	3	0	31
Timber, furniture	4	0	17	0	137
Paper printing and publishing	1	0	9	0	771
Rubber	1	0	1	0	40
Plastics	2	0	2	0	154
Construction	1	0	1	0	60
Public Utilities	6	1	65	21	1 512
Gas	2	1	58	21	276
Transport and communication	4	0	7	0	1 236
Distributive Trades	22	1	36	2	1 432
Wholesale	8	0	8	0	453
Retail	9	1	23	2	520
Other dealers	5	0	5	0	459
Other non-private occupancies	29	7	43	11	1 040
Education	1	0	1	0	10
Catering Hotels etc	15	5	23	9	613
Other services	12	2	14	2	342
Public administration and defence	1	0	5	0	75
Private dwellings	2	1	12	2	44
Private house	1	0	12	0	30
Private flat	1	1	0	2	14

