



The Scottish Office Home and Health Department

Her Majesty's Chief Inspector of Fire Services for Scotland

Report for 1990



THE SCOTTISH OFFICE HOME AND HEALTH DEPARTMENT

Her Majesty's Chief Inspector of Fire Services for Scotland

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Report 1990

of A Winton Esq, QFSM, MIFireE to the Right Honourable Ian Lang, MP, Her Majesty's Secretary of State for Scotland.

Sir,

I have the honour to submit my Report on the Fire Services in Scotland for the year ended 31 December 1990.

I have the honour to be,

Sir,

Your obedient Servant,

A WINTON

Contents

Paragraphs

	Section A General
1–4	Inspections
5	Fire Service Inspectorate
6–9	Firemasters and Fire Authorities
10–11	Honours and Awards
	Section B Personnel and Administration
12	Establishments and Strengths
13–17	Wholetime Personnel—Operational
18–21	Retained and Volunteer
22–25	Control Room Staff
26–28	Discipline
29–30	Health
31–32	Pensions
	Section C Operational
33–41	Fires and Other Emergencies
42–45	Fatalities
46–49	Rescues
50–51	Road Accidents
52	Fire Damage
	Section D Supplies and Services
53–56	Transport
57–58	Uniform
59–66	Premises
67–69	Equipment
70–72	Water Supplies
73–77	Communications
	Section E Fire Prevention
78–81	Summary
82–85	Inspection and Certification of Premises
86–87	Education and Publicity
88–90	Joint Fire Prevention Committee
91	Civic Government (Scotland) Act 1982
92	Building Standards Advisory Committee
93–94	Health and Safety Executive
95–98	National Fire Prevention Youth Quiz
	Section F Training
99–102	Scottish Fire Service Training School
103–110	Fire Service College
111–113	Brigade Training
114–117	Fire Services Examinations Board
118–121	The Institution of Fire Engineers

Section G Miscellaneous

122-124	Scottish Central Fire Brigades Advisory Council
125-135	Research
136-138	Civil Defence and Emergency Planning
139-143	FINDS
144-147	Fire Services National Benevolent Fund
148-150	Fire Services Sports and Athletics Association
151-155	Competitions

Section A General

- Inspections**
1. A full programme of inspections of the eight Scottish brigades and the Scottish Fire Service Training School was carried out during the year and the standard found in all cases was satisfactory. In addition to the formal inspections visits were made to brigades throughout the year by members of the Inspectorate to discuss and give advice on particular matters.
 2. The level of co-operation received from all brigades during the inspection process was commendable and this co-operation enabled the Inspectorate to further develop their advisory role in their dealings with Firemasters and principal officers of brigades.
 3. The normal pattern of reporting verbally to Fire Authorities and Fire Boards on the outcome of the inspection was continued and reports were made to all authorities except one where, because of special circumstances, it was not considered appropriate to make a report.
 4. I was able to stress and discuss with elected members the important part which local authorities could play in developing public awareness of the dangers of fire and how they could assist in the various campaigns being organised to reduce fire deaths in the home in Scotland.

- Fire Service Inspectorate**
5. There was no change to the establishment of the Inspectorate during the year and the strength remains at:

HM Chief Inspector	—1
HM Inspector Grade II	—1
Senior Assistant Inspector	—1
Assistant Inspectors	—3
Staff Officer	—1

During the year the Staff Officer completed the period of secondment to The Scottish Office and returned to his brigade. A new appointment has been made and I would wish to thank Firemasters for encouraging suitably qualified personnel to apply for this post. A period of service with the Inspectorate can clearly be beneficial to the future career development of the officer appointed.

- Firemasters and Fire Authorities**
6. At the end of the year the following Firemasters were in post:

Central Region	Firemaster I S T Adam, QFSM, GIFireE
Dumfries and Galloway	Firemaster J B Stiff, QFSM, GIFireE
Fife	Firemaster J White, BA, MIFireE
Grampian	Firemaster A N Morrison, QFSM, MIFireE
Highland and Islands	Firemaster D Grant, GIFireE
Lothian and Borders	Firemaster P D Scott, MIFireE
Strathclyde	Firemaster C B Halliday, QFSM, MIFireE
Tayside	Firemaster D Marr, MIFireE.
 7. During the year Acting Firemaster D Marr was confirmed in his appointment as Firemaster of Tayside Fire Brigade.
 8. Firemaster C B Halliday intimated his intention to retire from his post early in 1991 and I would wish to take this opportunity to thank him for the major contribution

he has made to the British Fire Service and in particular for the work he has done during his time in Scotland. The appointment of a new Firemaster in Strathclyde is expected shortly.

9. I would wish to record the thanks of the Inspectorate to elected members, Firemasters, principal officers of brigades and officials for their co-operation with the Inspectorate during visits. There has been a satisfactory level of discussion with senior officers of brigades in the past year and I would commend the willingness of all those involved in the discussions to take a fresh look at the level of service being provided to the public. There is no shortage of drive and initiative in the leadership of the Scottish Fire Service or of interest of elected members and there is ample evidence of determination to bring about developments and improvements in many areas.

Honours and Awards 10. The following received recognition in The Queen's Honours Lists:

Queen's Fire Service Medal

Firemaster A N Morrison, MIFireE, Grampian Fire Brigade.

British Empire Medal

J N F Reid, Retained Sub-Officer, Dumfries and Galloway Fire Brigade.

The Fire Brigade Long Service and Good Conduct Medal was awarded to 178 members of the Scottish Fire Service.

11. I was pleased to be able to attend the presentation by the Lord Lieutenant of their respective areas of the Queen's Fire Service Medal to Firemaster J B Stiff and Firemaster A N Morrison. I would offer my sincere congratulations to all those whose gallantry or service was recognised by awards during 1990.

Section B Personnel and Administration

Establishments and strengths 12. The establishments and actual strengths of brigades are shown in Table 1.

**Wholetime personnel—
Operational**

13. The total establishment figure for wholetime operational members of Scottish brigades as at 31 December 1990 was 4,486, an increase of three over last year's total. (There has been an increase in the establishment figure for Scottish brigades of 114 firefighters since 1985). The actual strength of brigades was 4,439, a decrease of 17 over last year's figure, bringing to 47 the difference between approved and actual establishments. Having in mind however that a number of brigades have recruits ready to join the first training course of the new year, this difference between approved and actual establishment does not give cause for concern. Fife and Tayside join Strathclyde in including female firefighters in their strength returns, bringing the number of wholetime female firefighters in Scotland to four.

14. During the year 172 members left the service for a variety of reasons, an increase of 33 over the previous year's figures, while 156 firefighters joined the service. Details of gains and losses of personnel by brigade are shown in Table 2.

15. Retirement on medical grounds again increased, rising to 104, an increase of 30 over the previous year's figure and a three-fold increase since 1980. The table below shows a breakdown of personnel retiring from the service since 1985 showing those retiring (a) on normal pension, (b) retiring as a result of the over-40 medical and (c) retiring on medical grounds other than the over-40 medical.

	1985	1986	1987	1988	1989	1990	Totals
(a) Retiring on pension	30	42	47	40	42	33	234
(b) Retiring as a result of failing the over-40 medical	3	7	4	3	4	12	33
(c) Retiring on medical grounds other than as a result of failing the over-40 medical	54	58	59	57	70	92	390

16. Retirement on pension occurs when personnel complete 30 years' service or in certain instances on reaching the age of 55 years. The over-40 medical applies to firefighters when they reach the age of 40 and is applied at 3-yearly intervals thereafter. Retirement on medical grounds other than as a result of failing the over-40 medical applies to personnel who are considered by the Brigade Medical Officer to be unfit to continue with fire-fighting duties notwithstanding their age or length of service. While all medical retirements are a cause for concern, the rapid rise in personnel who retire under category (c) is a particular problem.

17. As stated in last year's report the Fire Services (Appointments and Promotion) (Scotland) Regulations became effective in April 1989. These Regulations prescribed entry standards for the Fire Service which should assist in detecting any incipient medical problem before applicants enter the service. In addition supporting guidance was given in the form of general recommendations for improving the fitness of firefighters during their service. The majority of brigades now have fitness training as part of their normal training programmes and to date four brigades have introduced occupational health schemes; others are actively pursuing this matter. While it is too early yet to see any direct benefits from these initiatives it is to be hoped that they will have a positive effect in reducing the

rising number of firefighters who are having to retire early as the result of ill-health.

Retained and Volunteer 18. Retained and volunteer establishments are:

	<i>Establishment</i>		<i>Actual Strength</i>	
	1989	1990	1989	1990
Retained	2,561	2,567	2,395	2,422
Volunteer	1,536	1,559	1,387	1,331

19. The number of retained members actually in post at 2,422 is the highest figure recorded for many years and reflects favourably on the efforts made by Firemasters to ensure the number of retained personnel available for fire-fighting duties is maintained at a reasonable level. Of these 11 retained and 20 volunteers are female.

20. In Highland and Islands Brigade the volunteer unit at Gairloch was upgraded to retained status with a consequent reduction in the number of volunteer units.

21. Under the auspices of the Scottish District of the Chief and Assistant Chief Fire Officers' Association (CACFOA) a working party was set up to review and report on the possible implications of the Control of Substances Hazardous to Health Regulations (COSHH) on the volunteer service. The COSHH Regulations place aonus on Fire Authorities and Fire Boards as employers to provide adequate protection for their employees, while attending operational incidents, from the effects of hazardous substances. As traditionally volunteer personnel have not been provided with the same level of personal protection as wholetime and retained members of the service, mainly because of their limited involvement in the operational field, it was considered necessary to review the level of personal protection provided at present in view of the implications of the Regulations. There are 140 volunteer units located throughout Scotland. It will be for the brigades with volunteer units to consider the response appropriate for their units.

Control Room Staff 22. The establishment total for Control Room Staff is 203 (195) and the number in post is 201 (194)—the previous year's figures are shown in brackets. The increase of eight in the approved establishment follows reviews of staffing levels in Highland and Islands and Lothian and Borders with an increase of four in each brigade.

23. While the majority of brigades are provided with control suites of adequate size and layout, two brigades have decided that their existing controls are inadequate to meet future developments and intend to provide new premises. Modern control suites require premises which have sufficient room to house the mobilising equipment, a control room with space for the operators to work comfortably and which is provided with lighting, heating, ventilation and furnishings which are compatible with modern computer technology. In tandem with this is a need for reasonable staff areas and offices for use by control personnel.

24. Brigades will be assisted with their development plans by reference to the Logica Report on the next generation of Fire Brigade Mobilising Systems. Logica Consultancy Ltd were commissioned by the Home Office to produce guidance for brigades across the whole range of tasks relevant to the replacement of existing communications systems. The guidance comprised advice on assessing requirements, specifying the need, tendering evaluation, installation of equipment, software and training needs.

25. The complete Report, which comprises seven volumes, was published towards the end of 1990 following consultations with brigades and equipment manufacturers. It provides a reference manual covering all the necessary steps that need to be taken in the refurbishment or replacement of a brigade control.

Discipline 26. During the year 14 members of brigades were charged with offences under the Fire Services (Discipline) (Scotland) Regulations and 30 charges were made. This compares favourably with the previous year's totals of 16 and 25 respectively.

27. Punishments awarded were:	
Stoppage of Pay—	8
Reprimand—	3
Requirement to resign as an alternative to dismissal—	1

In addition, one member was discharged for misconduct without being charged under the Discipline Regulations.

28. It is pleasing to note that a satisfactory standard of discipline is being maintained throughout the Scottish Fire Service. The number of cases of breach of discipline remains small in relation to the number of personnel who come within the scope of the Discipline Regulations, having in mind that brigades provide a service to the public 24 hours per day throughout the year.

Health 29. The average number of days lost by all brigades due to sickness of wholetime personnel was 5.67%, which is the highest figure recorded for the past 10 years. As usual a number of long-term absences through sickness had a disproportionate effect on the percentage figures of some brigades. Below is a table showing average sickness rates over the previous 10 years:

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
%	5.12	5.13	5.12	4.39	4.50	5.13	4.50	5.00	5.00	5.67

30. The report of the working party set up at the request of the Home Office, comprising the Home Office, the Scottish Office Home and Health Department and employer and employee representatives of the National Joint Council, to discuss conditions of service issues raised by the Audit Commission's Occasional Paper No. 1 on value for money in the fire service, examined the effects of sickness levels recorded by brigades and concluded that:

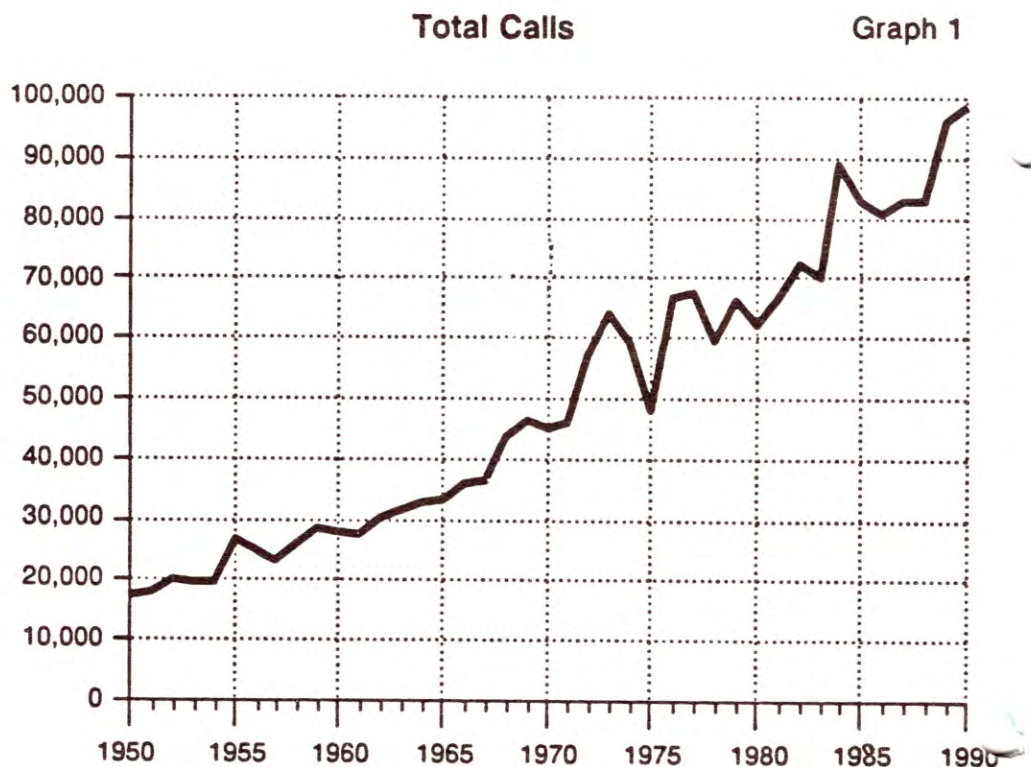
1. HM Inspectors should, during the course of annual inspections of brigades, monitor sickness levels on a systematic basis and encourage fire authorities to address apparently excessive levels.
2. Those brigades which did not yet have occupational health schemes in place should consider their introduction.

Pensions 31. The Firemen's Pension Scheme (Amendment) Order 1990 amends the Firemen's Pension Scheme 1973 in the light of various changes made by the Social Security Acts 1985 and 1986, the overall purpose of which was to make pension rights more flexible. The main changes are the right to opt out of the occupational scheme, the reduction of the minimum qualifying period for a pension from five to two years and a relaxation of the conditions under which pension rights can be transferred.

32. Because the Social Security legislation had the effect of overriding any conflicting provisions in occupational pension schemes it was possible to introduce the above changes administratively. The Order came into force on 1 October 1990 but some of the amendments are in practice effective from 6 April 1988. Retrospection is permitted by the Superannuation Act 1972.

Section C Operational

Fires and other emergencies 33. There was an increase in the total number of calls received by Scottish brigades during 1990—up from the record high total in 1989 of 96,124 to 98,763—an increase of 2,639. Graph 1 indicates the increase in calls over the past 2 years and highlights the ever increasing work load faced by the fire service in Scotland since the early 1950s.



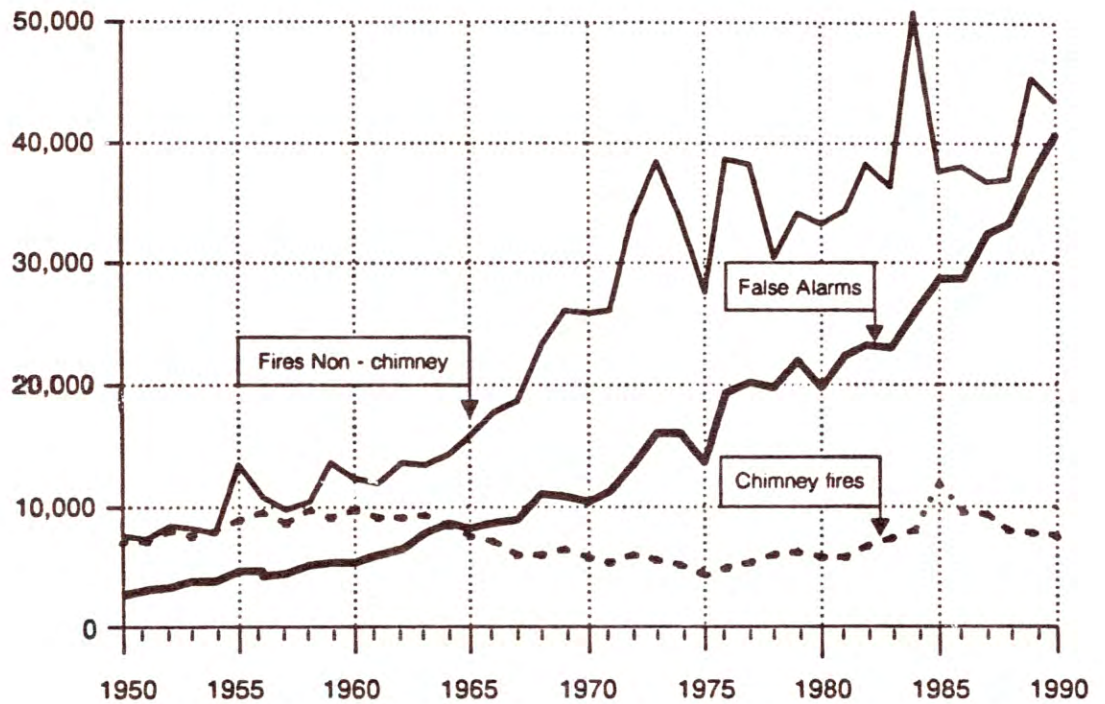
34. A detailed breakdown of the number and types of call is shown in Table 3 which illustrates each brigade's work load in seven categories and indicates the relative size of fires attended by the number of pumps required to extinguish them. Comparison with the equivalent tables for 1989 indicates there is little variation in the number of fires attended; a 17.5% increase in special service calls to 7,472; a 9.7% increase in false alarm calls made up as follows: False Alarms (Good Intent) 29% to 17,164, False Alarms (Apparatus) 3.7% to 8,237 and False Alarms (Malicious) 10.5% to 15,241. There are reductions in the work load in the case of chimney fires down 3.7% to 7,375 and secondary fires—down 7.8% to 22,864. This follows the major increase of over 40% in this category in the previous year. (Percentage figures are rounded up or down and may not necessarily add up to 100%.)

35. A breakdown of the types of fire call received since the early 1950s is illustrated in Graph 2. The most important trend to emerge from the graph is the continuing rise in the number of false alarm calls in relation to other calls—up from approximately

2,500 in 1950 to over 40,600 in 1990. If this rise in numbers is maintained at the present rate of increase it will mean there will soon be more calls to false alarms than fires.

Breakdown of Calls

Graph 2



36. An illustration of the proportions of calls of different categories in 1990 is given in Graph 3. The size of segments indicate increases in false alarms and special services and reductions in all categories of fires. With the exception of false alarms where there is an increase of 2.8% and secondary fires with a reduction of 2.6%, the other changes are minimal when compared with the previous year's figures. However the wasted resources in responding to false alarms is clearly illustrated. This is the first time the number of false alarm calls has exceeded 40% of the total work load of brigades.

37. The proportions of different types of false alarms during the year are shown in Graph 4. The size of segments show only minor differences from the previous year's Report. The equivalent percentage segments for 1989 were: apparatus faults 21.5%; good intent 41.3% and malicious 37.2% which show slight increases in good intent and malicious. However the chart should be seen as an indicator that over 57% of all false calls are preventable by either improved maintenance or by members of the general public taking a more responsible attitude towards false alarm calls.

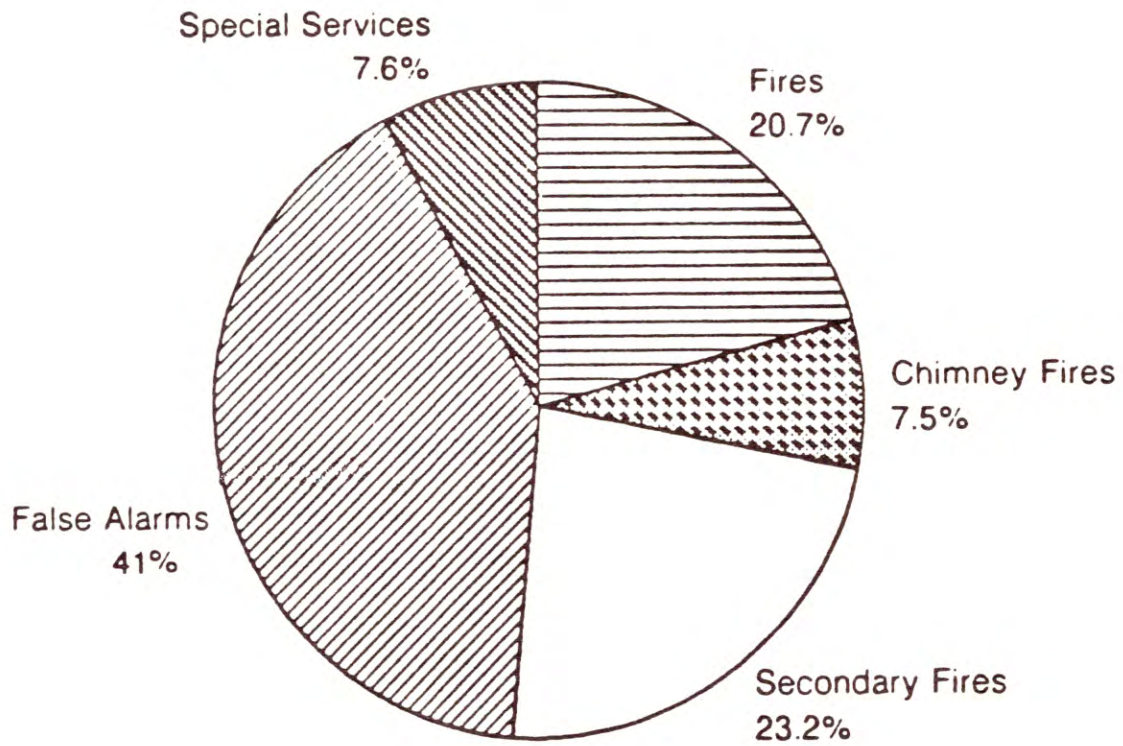
38. The increase in false alarm calls over the past five years is illustrated in the table below.

	1986	1987	1988	1989	1990	Increase over 1986 figure %
False Alarm— (Good Intent)	11,734	12,293	12,925	15,302	17,164	46.2
False Alarm— (Apparatus)	6,409	7,034	7,099	7,943	8,237	28.5
False Alarm— (Malicious)	10,236	12,727	12,930	13,795	15,241	48.8
Total	28,379	31,664	32,324	37,040	40,642	43.2

Type of Call

Graph 3

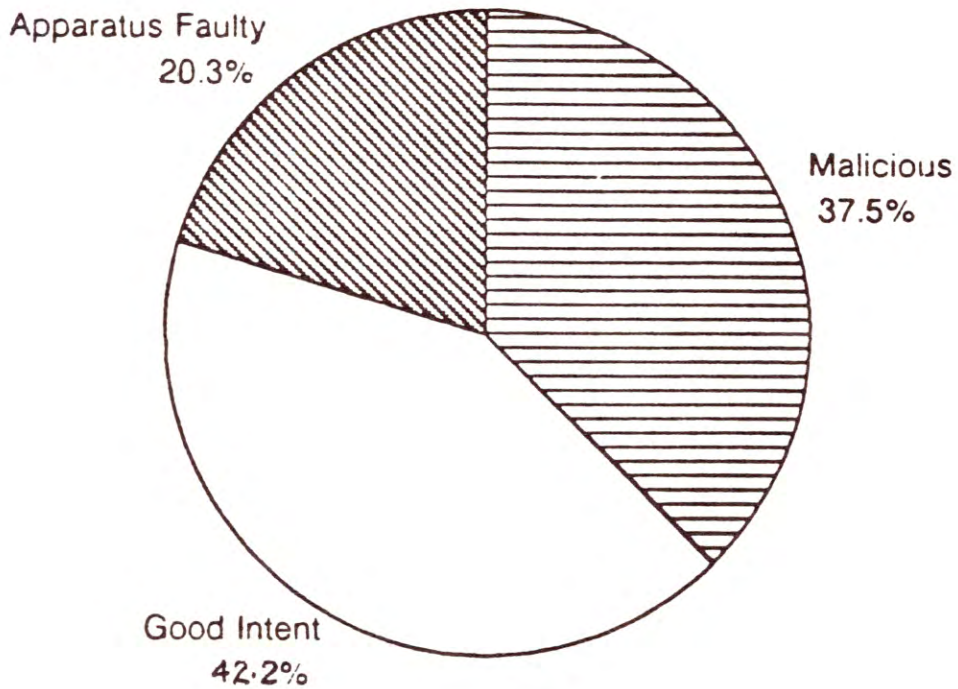
1990



Type of False Alarm

Graph 4

1990



39. In relation to the above it is worth noting that over a period of 10 years (1981–90) the number of false alarm calls has gone up from 22,141 to 40,642—an increase of 83.5%. Calls to other incidents—fires non-chimney and chimney fires over the same period have gone up from 39,320 to 50,649, an increase of 28.8%.

40. While the number of false alarm malicious calls fell in two brigades in the year under review, there were major increases recorded in Highland and Islands (up over 41%), Lothian and Borders (up over 37%), Tayside (up over 25%) and Grampian (up nearly 23%) when compared with the previous year's figures.

41. The continuing increase in the number of malicious calls is disappointing in view of the efforts made by brigades in recent years to highlight this problem. Reference was made in last year's report to the recommendations contained in the report of the Joint Working Party on the Audit Commission Occasional Paper No. 1. The Working Party were agreed that the most effective means of deterring a significant number of potential offenders would be the provision of communications systems which improved the means of identifying the source of the call. They welcomed British Telecom's intention to introduce digital exchanges throughout the country with the potential which such systems offer for reducing the number of malicious false calls. It is estimated that to date approximately 50% of the country is now covered by digital exchanges and it is expected that this programme will be completed by 1994.

Fatalities

42. The number of fatalities recorded by fire brigades during the year increased from 113 in 1989 to 133. While this is an unfortunate reversal of the trend of the last two years when the numbers fell, even with this increase the number of deaths is well below the high figures recorded in the mid-1980s. The main areas of increase were in Strathclyde—up from 56 in 1989 to 73, which figure represents over half of all fire deaths recorded—and Dumfries and Galloway—up from one in 1989 to eight, in this case however one of the deaths was as a result of a fire caused by a road accident and four as a result of a fire following an aircraft crash. Below is a table showing fire deaths by brigade and deaths per 100,000 of the brigade population over the past 10 years.

FIRE DEATHS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average fire deaths per 100,000 of brigade population %
Central	10	4	5	9	5	9	17	11	4	4	2.86
Dumfries and Galloway	4	2	4	2	8	2	4	7	1	8	2.97
Fife	12	3	7	7	6	9	12	11	6	5	2.34
Grampian	11	9	12	8	18	11	12	12	12	11	2.32
Highland and Islands	10	8	11	10	11	9	5	10	9	6	3.2
Lothian and Borders	29	25	26	26	23	29	21	26	19	22	2.87
Strathclyde	64	78	72	89	89	87	83	69	56	73	3.25
Tayside	5	13	18	13	11	9	14	4	6	4	3.97
Totals	145	142	155	164	171	165	168	150	113	133	2.97%

Population calculations are based on projected figures for 1990 from General Register Office for Scotland, Population Statistics Branch and are therefore approximations.

43. Of the total deaths recorded in 1990 123 occurred as a result of fires in the home with fires in flats being the most common location. There were no fire deaths recorded in buildings which are the subject of fire prevention legislation. Twenty-six of the fire deaths in the home occurred at 13 incidents. The group most at risk as in past years are the elderly, the 61–75 age group accounting for 37 and the 75-years-plus group 17 of the 133 total fire fatalities. The number in the 40–60 age group is the highest for many years at 47, and there was a considerable dropping off in fire deaths in the younger age groups—by far the lowest number recorded for many years. While there is insufficient evidence to suggest there

is any major shift in the age groups recording the highest number of deaths which have been constant for many years, the total of three for the younger age group is worth noting. Below is a table showing fire deaths per age group and the average deaths recorded for each age group per 100,000 population over the past 10 years.

FIRE DEATHS BY AGE GROUPS

Age group	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total	Annual average per 100,000 head of population (by age) %	Population
0-5	11	11	17	22	17	10	18	14	8	2	130	3.3	394,099
6-10	3	2	5	5	6	1	5	6	2	1	36	1.1	321,019
11-20	7	9	5	10	9	7	11	6	12	15	91	1.3	683,210
21-40	24	17	23	28	30	24	24	29	16	25	240	1.5	1,538,467
41-60	34	34	35	31	28	34	38	20	32	36	322	2.8	1,132,167
60+	66	69	70	68	81	89	72	75	43	54	687	6.7	1,021,681
Total	145	142	155	164	171	165	168	150	113	113	1,486	2.9%	5,090,643

Notes:

The age groups for the 1990 annual report have been changed from that of previous years. It is considered the new age groupings give a more detailed representation of the population for the coming decade. The 1990 figures have been statistically adjusted to conform to the previous year's groupings.

Population figures based on projected population 1990 as supplied by General Register Office for Scotland, Population Statistics Branch.

44. Details of the age groups, location and months of occurrence of fatalities by brigade are shown in Table 4.

45. While the reversal of the trend of the past two years will be a disappointment to those involved in trying to reduce the fire death total in Scotland it is still too early to evaluate the benefits that should come from the provision of smoke alarms in the home and the use of safer foams in household furnishings. Likewise the work being done in the field of community education with regard to the danger from fire in the home by all brigades in Scotland still requires time to develop. It is to be hoped that the result of these three major initiatives will in future years have an impact on the high death total recorded in Scotland.

Rescues 46. The number of persons rescued by brigades from fire situations was 766, an increase of 107 over last year's figure and a near 100% increase in this work over the past 10 years. The table below shows the figures over that period:

FIRE RESCUES BY BRIGADE PERSONNEL

1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
385	477	505	534	669	922	579	685	659	766

47. Although it cannot be assumed that anyone who was rescued from a fire would otherwise have died, it is more than likely that the annual loss of life as a result of fire would be even greater if it were not for the prompt, efficient action of firefighters attending these incidents, very often at considerable risk to their own personal safety.

48. The number of persons rescued from other dangerous situations where no fire was involved was 526 compared with 495 in the previous year. In the case of persons rescued who had become trapped as a result of road accidents the number was 886. This number continues to rise—819 in 1988, 704 in 1987, 566 in 1986.

49. With regard to persons rescued from road accidents, the increase from 566 in 1986 to the present figure of 886 reflects the increase in the attendance of brigades at road accidents over the same period—up from 1,586 to 2,170.

Road accidents 50. Attendance by fire brigade crews continues to rise and now stands at 2,170, an increase of 84 over the previous year. While on a number of occasions crews

would require to take only limited action at the incident, as with all emergencies the early presence of the brigade acts as a valuable safeguard against the possibility of fire or explosion following fuel spillage. Co-operation with police and ambulance crews at these incidents is of prime importance and close liaison at these emergency situations was again shown to be at a satisfactory level.

51. Although there has been a steady increase in the attendance of brigades at road accidents and in the number of persons rescued from these accidents, the number of persons killed as a result of fire caused by road and vehicle accidents has remained relatively steady over the past 10 years as shown in the table below.

FIRE DEATHS AS A RESULT OF ROAD TRAFFIC ACCIDENTS

1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
7	4	8	6	7	7	13	3	11	8

Fire damage 52. Figures obtained from the Association of British Insurers indicate the estimated monetary fire loss for the United Kingdom in 1990 to be £1,005.2 million compared with £792.4 million in 1989. The corresponding figures for Scotland are not available.

Section D Supplies and Services

Transport 53. The number of pumping appliances in use at the end of the year was 414 plus 90 units classed as special appliances and 54 other vehicles. The total of 54 others include a wide variety of purpose-built lightweight vehicles specially designed for use in the more remote areas and normally crewed by volunteer personnel.

54. The range of types of special appliances being introduced by brigades is developing each year and includes vehicles which have interchangeable units called "pods" or "the trailer alternative". These units are carried by a "prime mover", an articulated tractor unit, and can be put to a wide variety of uses, eg command and control unit, breathing apparatus training unit, catering unit, fire prevention display unit or other special or infrequently used equipment loads. This system has the advantage of multiple use without the need for a large number of special appliances each of which would need to be separately housed and maintained.

55. All brigades are now adopting a system of carrying a range of road rescue equipment on certain pumping appliances. The provision of this equipment on pumping appliances improves the range of work that can be carried out by the crew and ensures that on arrival at a road accident firefighters can begin to release persons trapped using the equipment carried on the appliance instead of having to await the arrival of a specialist vehicle carrying rescue equipment.

56. The rate of accidents to fire appliances is still high in relation to the number of times they are used and very often these accidents take place during slow speed manoeuvres either when the appliance is being used for work other than emergencies or when it is being manoeuvred on the fire station. This usually results in the most modern appliances being taken out of service for repair and being replaced with older vehicles with less effective equipment and capability. Attempts to resolve this problem with improved facilities on vehicles, eg the sounding of a warning buzzer when reverse gear is engaged, additional driver training and supervision when reversing have still to produce a reduction in the number of this type of accident.

Uniform 57. The issue of the New Approach Directives which are published as part of the moves towards the Single Market European Community recommends standards for protective clothing for firefighters. The new standards will make major changes in the definition of materials suitable for use for this purpose compared with the present accepted standards in this country. One of the major changes likely to be introduced is that materials used in the manufacture of protective clothing should not melt when in contact with a heat source. Brigades are aware of the new proposals and consequently they are reviewing their current stock of protective clothing and assessing the availability of suitable materials which will comply with the new guidelines.

58. Trial and evaluation of the suitability and comfort of personal protective clothing is still on-going in brigades. Although there is some divergence of opinion as to material and style of fire tunic, the principle of issuing the bunker coat style tunic, which provides additional protection to the lower body of firefighters, would appear to have been accepted by all brigades.

Premises 59. Following completion of the refurbishment of the existing part of the Strathclyde Fire Brigade Headquarters the new complex was formally opened by Her Majesty, The Queen, on 12 July 1990. The Headquarters complex is one of the most advanced

in the United Kingdom and reflects very favourably on the building programme of the Regional Council. Work also continued on the refurbishment of the fire station at Hamilton which adjoins the Headquarters building and this work is expected to be finalised soon. A new replacement retained fire station was completed at Newmilns and is now fully operational while work is due to begin soon on the building of a new replacement station at Dalry.

60. In Tayside the new 4-bay fire station and Divisional Headquarters built in Dundee to replace existing premises became operational in December 1990 and is due to be officially opened in March 1991.

61. The major refurbishment of the fire station in Kirkcaldy, Fife, was completed during the year and the station is now fully operational. In addition to this a new heating system and training galleries have been installed in the breathing apparatus training building at Thornton.

62. In Dumfries and Galloway the retained fire station at Lockerbie has been replaced with a new station and this continues the policy of the authority in replacing fire stations which do not meet modern standards. It is expected that work will commence soon on a replacement fire station at Whithorn.

63. In Highland and Islands a new fire station has been built at Gairloch. This station, which will be crewed by retained personnel, will replace the volunteer unit which formerly provided fire cover for the area. The station was formally opened on 28 November 1990 and this opening coincided with the upgrading of fire cover from volunteer to retained. Garage and vehicle accommodation has also been provided for the volunteer units at Kinlochbervie, Kilchoan and Lochaline.

64. The replacement fire station for the retained unit at Denny in Central Region was completed early in the year and is now fully operational.

65. In Lothian and Borders new roof coverings have been provided at four fire stations and the fire prevention offices at Brigade Headquarters are undergoing a major refurbishment. Work is due to begin shortly on a new replacement fire station at Bathgate.

66. The practice of installing exhaust fume extract systems in fire stations is becoming standard in a number of brigades. These systems ensure that when appliances are being started up diesel fumes are removed from the appliance room. This not only ensures a cleaner and healthier working atmosphere for station personnel, but reduces considerably the need for redecoration of appliance rooms.

Equipment

67. A new specification has recently been issued in respect of the Distress Signal Unit (DSU) which is carried as part of the breathing apparatus set by all wearers. At present the DSU is operated manually if the wearer gets into difficulty and requires assistance. The new specification relates to an automatic DSU which will actuate automatically should the wearer stop moving either through collapse of the wearer or the wearer becoming trapped. As brigades require to replace their manually operated units as part of the normal replacement cycle for this equipment it is expected that the automatic DSU will become the next generation of DSUs.

68. Brigades in Scotland use a wide range of tools and equipment, primarily for rescue purposes, most of which are adopted from commercial and industrial uses. In the field of cutting and burning as aids to rescue, the chain saw and thermal lance are relatively new acquisitions. Because of the danger from these tools to the operator, assisting crews and persons who are trapped, it has been found necessary to issue strict guidelines for their operational use. To date guidance has been issued with regard to the use of chain saws and it is expected that guidance will be issued soon on the safety precautions that will require to be taken when the thermal lance is being used.

69. Several brigades in the United Kingdom, including Grampian, have developed specialist units to assist with the rescue of persons trapped in inaccessible situations, eg cliff rescue, persons trapped on pylons or high masts, etc. These rescues require the use of specialist rope and line equipment and techniques which are relatively new to the fire service. A technical bulletin giving guidance on the safe use of special rope and line equipment, the standard testing of this equipment and the training of personnel who make up these units has recently been issued.

Water supplies

70. As the number of fire hydrants in use throughout the country continues to increase, the workload undertaken by brigades in checking, cleaning and maintaining hydrants also increases. The need to ensure that hydrant indicator plates are legible and accurate forms an important part of this work and the benefits that accrue for operational personnel in knowing the exact location of the hydrants in their station area is an added bonus. In the case of areas covered by wholtime personnel this work is carried out as part of the normal station routine, however, in areas covered by retained and volunteer crews this usually involves retained and volunteer personnel attending outwith their normal drill periods to carry out this work.

71. While the importance of ensuring hydrant maintenance is done on a regular basis, normally once per year, is acknowledged by all operational personnel, it says much for the enthusiasm and keenness of retained and volunteer firefighters that they are prepared to attend outwith their normal training commitment to ensure this work is completed. Therefore I am pleased to record that this important area of brigade work is being maintained at a suitable level.

72. As stated in previous reports the hydrant standardisation programme of brigades who still have non-standard hydrants in their area continues, although the pace of replacement of non-standard hydrants is largely dictated by the need for replacement of old water mains or the renewal of non-standard hydrants which have become defective.

Communications

73. The past year has been one of consolidation with all brigades refining the use of their new radio systems which were installed as a result of the World Administrative Radio Conference.

74. The allocation of a specific radio channel for the purpose of permitting the various Emergency Services to liaise directly with each other and which is accessible on the UHF personal radio systems by both the Fire and the Police Services was agreed. This was a recommendation made in the reports on a number of civil disasters, and agreements to operational protocols are now being finalised.

75. Procedures for the use of common fireground frequencies by the Ministry of Defence, airport brigades and other private fire brigades have also been introduced for invocation by Firemasters in appropriate circumstances.

76. Grampian and Highland and Islands Brigades were requested to re-tune a number of VHF radio channels in order to make room in the radio spectrum for the introduction of a new radio system for the Scottish Crime Squad. The costs of this exercise are being met by the Crime Squad and finalisation of the project is the subject of direct liaison with the brigades concerned.

77. The planned introduction of Personal Communication Networks (PCN) has resulted in a possible requirement for a frequency change to all fire service microwave radio links. This is a major project which is currently the subject of negotiations between the Radiocommunications Agency of the Department of Trade and Industry, the Home Office, the Scottish Office, the PCN companies and representatives of the Scottish emergency services. The aim is to agree a functional specification for the work needed to carry out the frequency change with the costs being met by the PCN companies.

Section E Fire Prevention

Summary 78. Stressing the need for fire precautions in the field of fire safety in the home is a never ending commitment, however basic precautions and some simple equipment could in most cases avert the tragedy of fatal or serious injury.

79. The steps taken to mitigate the threat of fire casualties in public, commercial and industrial buildings rely heavily on legislation, mainly the Fire Precautions Act 1971. Acceptable standards include the protection from fire of escape routes and exits, provision of a fire warning system and fire routine instructions detailing the actions to be taken in the event of fire and the procedure to be adopted on the actuation of the fire warning system.

80. In the domestic field, however, reliance has to be placed on the individual or family to apply a measure of self-protection. Publicity, both national and local, emphasises the fire prevention safety themes and here mention must be made of the constant efforts made by brigades to highlight the message of basic fire safety to members of the public. In recent years much of the publicity has been aimed at urging the occupiers of domestic dwellings to install simple self-contained smoke alarms. These alarms can provide an early audible warning of fire, require little maintenance and are inexpensive to purchase.

81. In addition to directing fire prevention publicity towards members of the public, special attention has been given by all brigades to stimulating the interest of school-children. To this end several brigades with large urban populations have created dedicated teaching units, funded through urban aid. The units include uniformed fire brigade personnel and teaching staff seconded from the local education authority. To date brigades have been encouraged by the results of their efforts which have been received with enthusiasm and a great deal of interest by the young people. Lasting, positive results are essentially long-term but this approach should provide a sound basis on which to develop the need for fire safety measures in the home.

Inspection and certification of premises 82. Brigades in Scotland inspected a total of 67,733 premises for fire prevention purposes during 1990. This reflects an increase of 154 inspections from that of the previous year.

83. An increase of 88 from the previous year was realised when 10,537 plans were submitted to fire brigades for comment.

84. The number of fire certificates issued under the Fire Precautions Act 1971 during the year was:

Factories	184	(209)
Offices, Shops, etc	602	(715)
Hotels and Boarding Houses	119	(168)
Total Certificates	905	(1,092)

The figures in brackets represent the 1989 equivalent and reflect a reduction of 187 certificates issued in comparison with the previous year's figures.

85. In addition the number of certificates which were revised by brigades was:

Factories	163	(281)
Offices, Shops, etc	485	(668)
Hotels and Boarding Houses	372	(451)
Total Certificates Revised	1,020	(1,400)

This reflects a decrease of 380 certificates being revised during the year.

Education and publicity

86. Over the Christmas and New Year period the Scottish Office Home and Health Department funded the screening of fire prevention television commercials with the continued theme of promoting the installation of smoke alarms. A fire prevention news release, endorsed by Lord James Douglas-Hamilton, MP, Minister for Home Affairs at the Scottish Office, was issued urging extra care over the festive season. The Department also continued to supply the eight Scottish brigades with publicity material for use in their local activities.

87. A news release, supported by Lord James, about fire safety, was also issued at the start of National Fire Safety Week (22-27 October). The theme for 1990—"Fire—Stop it Starting"—aimed at minimising the risk from fire in the home and at the need for industry and commerce to review basic fire safety procedures; the Week was supported and promoted by brigades at local level.

Joint Fire Prevention Committee

88. Two meetings of the Committee were held during the year and the items reported on included current work on the preparation of guides which are required for the Fire Precautions Act 1971.

89. As reported last year there is on-going work on the revision of the Hotels and Boarding Houses Guide which was issued by the Home Office/Scottish Home and Health Department in 1972. The draft technical guide has been circulated for public comment and final revision work is now in progress. The new guide will embrace current means of escape philosophy and British Standards appertaining to fire safety matters. There is also a non-technical guide entitled "Fire Safety Management in Hotels and Boarding Houses" being prepared in conjunction with the Fire Protection Association and the relevant Home Departments. It is intended that this guide should be scheduled for publication to complement the issue of the technical guide.

90. Two new Home Office/Scottish Office Home and Health Department guides were published in 1990. "Fire Safety at Work", issued in January 1990, is a basic guide for owners or occupiers. It explains how the Fire Precautions Act 1971 affects places of work and gives guidance on fire precautions. "A Guide to Fire Precautions in Existing Places of Entertainment and Like Premises" was published and became available in March 1990; the guide replaces the "Manual of Safety Requirements, Theatres and Other Places of Public Entertainment" published by the Home Office in 1934. The new guide covers a much wider spectrum than the 1934 guide and includes standards for Fire Precautions in small premises and special provisions for temporary structures.

Civic Government (Scotland) Act 1982

91. Regulations were made under Section 98 of the Civic Government (Scotland) Act 1982 which require electrical luminous tube signs and similar equipment to have cut-off switches for use by firefighters in the event of fire.

Building Standards Advisory Committee

92. The technical work on the major revision of The Building Standards (Scotland) Regulations, to which the Inspectorate contributed, was completed early in the year. The end product is reflected in the publication of the Technical Standards for Compliance with the Building Standards (Scotland) Regulations 1990 which became available in November. The primary document the Building Standards (Scotland) Regulations 1990 was laid before Parliament on 14 November of that year and is due to come into force on 1 April 1991.

Health and Safety Executive

93. The work of the Advisory Committee on Dangerous Substances held their scheduled meetings during the year. The Committee deals with advice on regulations

and codes of practice and general advice leaflets on dangerous substances. Their remit also includes analysis of serious fires which are the subject of Health and Safety Executive reports.

94. In the dangerous substances field the Dangerous Substances (Notification and Marking of Sites) Regulations came into force on 1 September 1990. The regulations will apply to any site with a total quantity of 25 tonnes. The regulations require persons in control of sites to notify in writing a short list of information to both the local enforcing authority for health and safety at work legislation and the local fire authority. The regulations also require that such sites should display warning signs at access points.

**National Fire Prevention
Youth Quiz**

95. The National Fire Prevention Youth Quiz is sponsored by the Fire Protection Association, Central Fire Liaison Panel and organised by the Chief and Assistant Chief Fire Officers' Association.

96. An annual event, it is open to all youth organisations who wish to enter a team of five, between the ages of 13–16 years. The quiz is based on fire-related general knowledge and fire prevention, the intention being to create a greater awareness of fire safety in young people.

97. Local contests are held and each brigade area presents a team to the Scottish Championships.

98. This year the Scottish District Final was held on Saturday, 16 June, hosted by Highland and Islands Fire Brigade. As usual a high standard of knowledge was displayed by the eight teams competing. The 1990 Scottish winner was the 30th "A" Dundee Guides, representing the Tayside Fire Brigade area.

Section F Training

Scottish Fire Service Training School

99. A total of 169 recruits completed their training during the year. Other courses were provided as follows, with the numbers attending in brackets:

Retained Firefighters	(58)
Retained Junior Officer	(30)
Wholetime Leading Firefighter	(65)
Breathing Apparatus Instructors	(40)
Retained Breathing Apparatus Operators	(7)
Retained Recruits	(37)
Specialist Legislation	(30)
Hospital Fire Safety	(82)
Road Traffic Accident Instructors	(20)
Prison Officers' Fire Prevention	(65)

100. Over the past few years there has been an increasing awareness of the need for physical fitness in the fire service, starting at recruit level and continuing through the firefighter's career. In 1987, my predecessor reported that the lack of training facilities at the School limited the promotion of fitness there and that it should be the aim of the School to teach fitness routines in appropriate surroundings. He recommended a review of the facilities to enable a proper standard of provision to be provided. It is, therefore, gratifying that a gymnasium has now been built within the School's policies at a total cost of £250,000 to the Scottish Office Home and Health Department.

101. The gymnasium was officially opened on 5 October 1990 by Lord James Douglas-Hamilton, MP, Minister for Home Affairs at the Scottish Office, on the occasion of the passing-out parade of the recruits' course. The Minister undertook the role of inspecting officer—normally the task of a Firemaster—and inspected the recruits and watched their display of the skills they had acquired in the previous 16 weeks. After officially declaring the gymnasium open he addressed the recruits and presented the prizes, including the Firemasters' Prize for the best recruit. The occasion was made more unique by the presence of all eight Firemasters.

102. In the course of the year the School was fortunate to receive a grant from the Fire Services Research and Training Trust to purchase equipment for the gymnasium and a thermal image camera.

Fire Service College

103. A total of 292 members of Scottish brigades attended courses at the Fire Service College during the year under review. This is a reduction in attendance at College courses of 61 compared with last year's record high figure of 353.

104. The principal reason for the shortfall can be attributed to reduced nominations for the Junior Officer and Junior Officer Advancement courses and the Fire Investigation and Assistant Divisional Officer seminars. There were a total of 44 less nominations for these courses and seminars in comparison with the previous year's figures.

105. Over the full range of courses provided by the College the number of places allocated to Scottish brigades compared very favourably with the number of nominations made by the various brigades. Only in the case of the Divisional Command course where 16 nominations were made and only nine places granted is there any cause for comment. The cost of travel and subsistence for attendance at the College

is a major consideration for Scottish brigades because of the distance involved in travel from all parts of Scotland. I would again commend Fire Authorities and Firemasters for ensuring that members of brigades in Scotland are not penalised because of travel costs. Attendance at College courses and seminars is essential in ensuring not only a balanced career development for personnel but that Scottish brigades are keeping fully abreast of advances which are taking place throughout the British Fire Service.

106. The introduction of a system of student reporting and assessment which was in use for the Brigade Command and Junior Officers' Courses has now been extended to include the Junior Officer Advancement, the Road Traffic Instructors' and the Breathing Apparatus Instructors' courses.

107. Changes have been made in the content and structure of certain College courses as a result of a review of fire prevention training. The present Junior Officer Course is to be renamed the Watch Commander Course and will now be of nine weeks' duration. A new Junior Officer Fire Prevention Course of four weeks' duration is to be introduced to improve fire prevention training at this level. Successful completion of the Junior Officer Fire Prevention Course will qualify personnel to attend the more advanced Specialist Fire Prevention Course at a later date in their career development. The new structure of fire prevention training was agreed following discussion between the Joint Fire Prevention Committee and the Joint Training Committee of the Central Fire Brigades Advisory Councils.

108. As reported last year, work was progressing on the construction of a railway incident training facility and a new training building which would include a shopping mall and high bay warehouse. This work is now complete and these additions to fireground training should further assist in the development of students dealing with practical fireground situations.

109. During the year Mr George Clarke, CBE, OstJ, FIFireE retired as Commandant of the College. I would wish to record at this time the outstanding contribution made by Mr Clarke to the development of the College during his time as Commandant and to pay tribute to Mr Clarke's long and distinguished career in the British Fire Service.

110. The new Commandant is Mr Brian Fuller, CBE, QFSM, FIFireE, the former Chief Fire Officer of the West Midlands Fire Service. Mr Fuller takes over at a time of major change at the College and I would wish him well in his new appointment.

Brigade Training

111. The majority of brigades are now involved in fitness training at station level with a set period of time for this particular training allocated in daily training programmes. These fitness sessions are conducted by qualified instructors who have received training in the special skills necessary for this work at either the centre recommended by the Home Office which is run by the Prisons Department or at a local approved College of Education. Brigades are encouraged to operate a monitoring system to enable personnel participating in fitness routines to check improvements in their personal fitness to enable instructional staff to develop the training in a progressive manner.

112. To ensure breathing apparatus training is being carried out in areas covered by retained personnel in compliance with Technical Bulletin 1/89 which relates to the operational use of breathing apparatus, a number of brigades are making use of pod or trailer units which have been specially equipped with crawling galleries and facilities to provide simulated heat and smoke conditions. This obviates the need to transport personnel from remote areas to the nearest wholetime fire station equipped with breathing apparatus training facilities and ensures that best use is being made of retained firefighters' training time.

113. While first aid training is given to operational personnel in all brigades, there are varying standards of training and instruction adopted, varying from the holding of a current first aid certificate to having a knowledge of first aid sufficient for fire

brigade use. A greater emphasis has been placed on this training in recent years and this includes training in casualty handling as part of the instruction in patient care. With the experience gained at rescue incidents allied to the training in basic first aid and casualty handling firefighters are now able to work more effectively with medical and ambulance personnel at incidents while rescue work is in progress to ensure the highest possible level of care is given to persons who are trapped.

The Fire Services Examinations Board

114. To obtain qualifications for promotion to a higher rank, firefighters are required to be successful in examinations set by the Fire Services Examinations Board. The examinations for promotion to the ranks of Leading Firefighter and Sub-Officer have both written and practical elements while the examination for promotion to the rank of Station Officer consists of written papers.

115. In Scotland, three local boards administer both the written and practical examinations for the Fire Services Examinations Board with the practical tests for the Leading Firefighter and Sub-Officer examinations taking place in the year following the written examinations.

116. The results of the written examinations are as follows (figures for the previous year are shown in brackets):

<i>Examination</i>	<i>Number of Candidates</i>	<i>Number and Percentage of Passes</i>	
Leading Firefighter	300 (327)	102 34.0%	(110 33.6%)
Sub-Officer	195 (176)	65 33.3%	(57 32.6%)
Station Officer	170 (179)	31 18.2%	(27 15.1%)

The pass rates for promotion to Sub-Officer and Station Officer showed an increase over the previous year of 0.7% and 3.1% respectively, but were still low.

117. Practical tests for candidates for the Leading Firefighter examination took place during March and April 1990 and those for the Sub-Officer examination were held during February 1990. The results (with equivalent 1989 figures in brackets) were:

<i>Examination</i>	<i>Number of Candidates</i>	<i>Number and Percentage of Passes</i>	
Leading Firefighter	169 (139)	103 60.9%	(74 53.2%)
Sub-Officer	95 (75)	49 51.5%	(39 52.0%)

Institution of Fire Engineers

118. Examinations for entry to the Institution are held annually at Graduate and Member level and personnel from six of the eight Scottish brigades were successful in passing these examinations last year. Successful completion of the Graduate Examination is accepted as an alternative to the Station Officer Examination set by Fire Services Examinations Board.

119. The Scottish branch of the Institution organised six meetings last year and visits and lectures covering such topics as Management Style for the 90s, Road Traffic Accident Investigation, the Work of the Procurator Fiscal's Office in relation to the Fire Service, combined with visits to Gates Rubber Company Ltd, Dumfries and Allied Distillers Ltd, Dumbarton, plus a briefing from the President, CFO Neil Wallington, ensured an interesting and varied year's activities.

120. Meetings and visits were held in a wide variety of centres and it was good to note that, despite the long distances that had to be travelled by members on certain occasions, the attendances at all meetings was satisfactory.

121. As reported last year, the Scottish branch was actively involved in the establishment of the Institution in Iceland and it was particularly gratifying for officials of the Scottish branch when they were invited to attend the inaugural meeting of the Icelandic branch of the Institution of Fire Engineers when the National President attended to present diplomas to members of the new branch who had been successful in the examinations.

Section G Miscellaneous

Scottish Central Fire Brigades Advisory Council

122. At the Council meetings held on 8 June and 7 December the chair was taken by Mr G A Hart, Secretary, Scottish Office Home and Health Department.

123. The Council considered reports from the Joint Committee on Fire Brigade Communications, Joint Committee on Appliances, Equipment and Uniform, Joint Committee on Fire Research and Joint Committee on Special Appliances. The Council also considered papers from the Joint Pensions Committee, Joint Fire Prevention Committee, Joint Committee on Fire Brigade Operations and the Joint Training Committee.

124. The Commandant of the Scottish Fire Service Training School presented a report at the June meeting on the work of the School during the 12 months to 31 March 1990.

Research

125. During 1990 the Joint Committee on Fire Research considered various fire related projects for inclusion in the Home Office Strategic Plan for fire research. There are two main sections of the Strategic Plan, one being concerned with fire prevention and protection and the other to assist the fire service to improve its effectiveness and efficiency. Many areas of research are on-going and often overlap into the following year, however an indication of the work involved in the fire research rolling programme for 1990 is summarised below.

126. Research is currently under way, at the Fire Research Station, in examining the toxicity of the products of combustion released from polytetrafluoroethylene (PTFE) in fire conditions. PTFE has a high thermal stability, but following research in the USA uncertainty exists about the toxicity of the thermal decomposition products. In view of the increasing use of PTFE in sheet form to cover large complexes such as shopping malls and sports stadia, research is being undertaken to establish whether there is a potential hazard to the public at or near the vicinity of such complexes arising from the decomposition of PTFE as a result of fire or heat.

127. The Fire Precautions Act 1971 requires fire authorities to subject premises storing or using highly flammable materials to the certification provisions contained in the Act. In the case of liquids and gases, highly flammable is well defined, but with many other substances, notably solids, this is not the case. The current guidance on solids does not include all materials that can be involved in a serious fire, suggesting these guidelines are no longer adequate. South Bank Polytechnic, London, has been commissioned to set up a data bank base on hazardous solid materials based on existing guidelines, with a view to producing new guidelines which will allow clear identification of the risks involved in the storage of flammable solids.

128. Smoke alarms fitted within dwelling houses can give an early warning of fire, but only increase fire protection if they are positioned correctly and are regularly tested and maintained. Data is to be collected over a 3-year period from actual fires in dwelling houses where smoke alarms are fitted. It is envisaged that useful information about maintenance and operation of smoke alarms will be obtained.

129. There is concern about the rapidly growing fires caused by materials used in modern upholstered furniture. Tests are now available for ignitability of such furniture, but there is still a need for a test of the rate of fire growth once ignition has occurred. There has been an on-going project at the Fire Research Station

studying fire growth in furniture in order to establish the basic principle on which a test(s) for fire development can be made. The study considers single items of furniture only.

130. Resulting from research undertaken following the Woolworths' fire in Manchester in 1979 when 10 people lost their lives, it was found there is a pressing need for a systematic study of the performance of sprinklers in a wide range of situations (including shops and department stores) with a view to assessing their potential for life safety. This study is to assess the performance of conventional and rapid response sprinkler systems and their effect on environmental conditions in a wide variety of situations, particularly large compartments. This is an on-going project being carried out at the Fire Research Station.

131. At the request of the Fire Service Inspectorate, data is being collated at the Fire Service College measuring the environmental factors of temperature, radiation and humidity which have to be withstood by fire-fighting personnel and their equipment. An instrumentation package is being developed which includes a portable data logger and transducers to measure temperature, air flow, humidity and radiated heat on and around firefighters dressed in fire kit and breathing apparatus.

132. A project has been on-going since 1987 and is likely to continue until at least 1994 to survey the whole field of fire-fighting with foams, in order to bring together the existing knowledge and advice, and to assess the areas where further research is required. At present requirements have been identified for work on Foam Specification and Foam Monitors.

133. Pump operators are expected to maintain constant pre-set pressures, despite changes in water supply pressure and delivery requirements. To this end the operator must manually change pump settings to compensate for these fluctuations in pressures. Following an assessment of Fire Service requirements and Brigade Trials, an Assisted Pump Control System has been developed which takes the form of an electronic device capable of coping with changes in pressure to assist in pump operation.

134. The Home Office Fire and Emergency Planning Department have instigated a project assessing the effectiveness of additives in fire appliance hose reel systems. It is intended that hose reels, as opposed to main lines of hose, will be used to fight relatively large petrol, alcohol and polyurethane foam fires. Large scale petrol fire tests and small scale tests against wood, tyres, furnishing foam and alcohol fires have been completed and reports issued. A video of this work is to be produced.

135. Firefighters carry a variety of devices on their appliances for use in rescue situations. These include pneumatic and hydraulic rams, spreaders and spears, various other cutting tools. Thermal imaging cameras, acoustic detectors and other electronic devices are in use to assist in the location of casualties at emergency incidents. The Fire Experimental Unit are to conduct a survey to identify any other equipment that could be adapted for fire service use, the relative capabilities of equipments will be assessed against present fire service requirements and any future trends that can be identified.

Civil Defence and Emergency Planning

136. Civil Defence and Emergency Planning covers the whole spectrum of fire service operations and as these plans develop there is increasing evidence of an overlap between peacetime and wartime planning assumptions.

137. Each brigade has a Brigade Emergency Planning Staff Officer (BEP SO), who is responsible to their respective Firemaster for the preparation of a brigade war plan. For war planning purposes Scotland is divided geographically north and south into two zones, each zone being co-ordinated by a Zone Fire Commander (Designate) of Firemaster rank and a regional staff officer. During 1990 the newly appointed Firemaster of Tayside, Mr D Marr, became the Zone Fire Commander (Designate), Northern Zone. The present Southern Zone Fire Commander (Designate), Firemaster C B Halliday of Strathclyde, is due to retire in early 1991.

138. The production of Brigade War Plans has progressed to a stage where each BEPSO has prepared war plans up to draft form. The completed plans are being forwarded to the Scottish Office Home and Health Department for study, the aim being to achieve a large measure of conformity in line with the Department's Emergency Planning Guidance. With the Brigade War Plans now completed to draft form the validation of these plans is about to be undertaken and to this end a national working party has been formed. This working party consists of four regional staff officers drawn from regions throughout the United Kingdom and includes a Scottish Regional Staff Officer (Northern Zone). The working party is expected to report on the test validation of plans during 1991.

FINDS

139. The Fire Information National Data Service is a system linking all United Kingdom fire brigades, including the Fire Service Inspectorate and the Fire Service College, by computer terminals. It is controlled from Bradford University where the main-frame computer is based.

140. Set up in 1988 after three years of research, the system is administered by the Chief and Assistant Chief Fire Officers' Association who were instrumental in its development. The system carries information on a wide range of fire-related subjects, including up-to-date information on research and evaluation of current projects.

141. The system was designed to meet the unique requirements of the fire service and it is believed to be the first of its type in the world. Progress has been made in its development but the system's full potential has still to be realised.

142. A useful function of the system is the electronic mail facility allowing brigades immediate contact with a written message, with the benefit of an equally quick response. This is potentially useful where there is a need for information or requests of an urgent nature to be transmitted nationally, particularly when used in conjunction with the specialist equipment register.

143. At present work is underway collating a hazardous chemical database, listing over 46,000 chemicals. It is envisaged that this facility will be available in 1991.

Fire Services National Benevolent Fund

144. During the year national income was £3,239,511, an increase of 12.17% over the previous year with national expenditure of £1,604,267. Figures for Scotland were an income of £196,781 with expenditure of £57,467.

145. Two major building projects were completed in 1990. Firstly the opening of the Ronnie Green Wing at Littlehampton, which was formally opened by Her Royal Highness Princess Alexandra on 19 April 1990. The new building, which cost £1.1 million, was named in honour of Ronnie Green who was Honorary Secretary of the Benevolent Fund from 1943-1978.

146. The second major project completed at a cost of £150,000 was the new swimming pool at Harcombe House, which was opened by the Chairman of the Fund, CFO J R Watson. This is a heated pool suitably equipped for use by disabled persons.

147. During the year the following personnel were presented with Certificates of Appreciation in recognition of their long service and devoted work for the Fund:

- | | |
|--------------------|---|
| Mr William Scott— | Strathclyde Fire Brigade |
| Mr Hector Robbie— | Strathclyde Fire Brigade |
| Mr Joe Smith— | Strathclyde Fire Brigade (formerly Glasgow Salvage Corps) |
| Mr Robbie Stewart— | Fife Fire and Rescue Service |

Fire Services Sports and Athletics Association

148. Although there was the usual level of activity in all sports at local, national and international level, there was little success for fire service sports teams from Scotland in representative matches in 1990.

149. This is the twentieth year of the establishment of the Association in Scotland and plans are well advanced to hold a dinner to celebrate the twenty-first anniversary

of the founding of the Association in Scotland following the annual general meeting in April next year. It is the intention to invite all founder members who are contactable.

150. In approaching its twenty-first year of operation in Scotland the Association is now firmly established as an effective body capable of ensuring that fire service personnel can pursue their sporting interests in a wide variety of sports. It also assists in making valuable contacts between brigades and other members of the Association throughout the whole of the United Kingdom and these contacts are now well established in the wider European scene. The most important thing however is for the maximum number of members of brigades to participate fully in the wide range of sporting activities which are available to them. There are considerable benefits to individuals who participate in those events, not only will this enhance their personal skills but it will also improve their personal fitness. Brigades also benefit from this by having fitter members who have learned through their involvement in sport the benefits of teamwork. Although there is some limited assistance from brigades, both financial and administrative, the main thrust of the work in promoting and organising the various functions is usually carried out by a few dedicated members and I am sure all those who benefit from their involvement in the various sports would agree that without this dedicated group of background support the Association in Scotland would not have achieved its present eminent position.

Competitions 151. Each year national competitions are held in which teams from fire stations throughout Great Britain match their knowledge and skills in first aid and fire-fighting with both competitions being organised and run by the Chief and Assistant Chief Fire Officers' Association.

152. The Scottish District Final of the National First Aid Competition was held on 7 April 1990 at the Scottish Ambulance Service Headquarters in Glasgow. This competition is open to both wholetime and retained personnel including control room staff. Winners of the competition were:

Men's Competition—	Strathclyde Fire Brigade
Women's Competition—	Grampian Fire Brigade
Open Competition—	Strathclyde Fire Brigade

This is the tenth year in succession that Strathclyde have been successful in the Men's and Open Competitions.

153. Both Strathclyde teams competed in the National Finals held at the Fire Service College, Moreton-in-Marsh, where they came fourth and seventh in the Men's and Open Competitions.

154. The Technical Quiz, which is funded by the Fire Service Research and Training Trust, takes the form of a quiz competition for wholetime members in alternate years with a similar type competition for retained members in intervening years. This competition has been in operation for over 30 years now and has proved invaluable in encouraging a study of technical matters relating to the work of operational firefighters.

155. The Scottish finals were held on Sunday, 11 February 1990 and were hosted by Lothian and Borders Fire Brigade. The winners on this occasion were Fife Fire and Rescue Service. Their wholetime team from Lochgelly were eventually eliminated from the competition in the Northern District Finals held at Cleveland.

ESTABLISHMENT AND STRENGTH OF FIRE BRIGADES

as at 31st December 1990

Table 1

Operational Personnel	CENTRAL		DUMFRIES AND GALLOWAY		FIFE		GRAMPIAN		HIGHLAND AND ISLANDS		LOTHIAN AND BORDERS		STRATHCLYDE		TAYSIDE		GRAND TOTALS		
	Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		
		Male	Female		Male	Female		Male	Female		Male	Female		Male	Female		Male	Female	Male
Firemasters	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	8
Assistant Firemasters	1	—	1	—	1	—	2	—	1	—	2	—	5	—	1	—	14	—	14
Senior Divisional Officers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
Divisional Officers Grade I	1	—	1	—	1	—	2	—	1	—	2	—	4	—	1	—	12	—	13
Divisional Officers Grade II	4	—	2	—	4	—	3	—	4	—	3	—	14	—	4	—	15	—	13
Divisional Officers Grade III	—	—	2	—	2	—	6	—	3	—	15	—	19	—	8	—	47	—	45
Assistant Divisional Officers	9	—	8	—	9	—	12	—	9	—	20	—	34	—	8	—	40	—	40
Station Officers	17	—	8	—	37	—	33	—	8	—	53	—	172	—	14	—	115	—	113
Sub Officers	27	—	9	—	30	—	32	—	8	—	68	—	31	—	37	—	366	—	333
Leading Firefighters	32	—	8	—	29	—	24	—	7	—	233	—	226	—	36	—	431	—	421
Firefighters	148	—	56	—	234	—	180	—	48	—	461	—	282	—	44	—	588	—	574
Totals	240	239	97	—	382	377	311	308	95	95	721	687	2,231	2,231	401	401	4,486	4,435	4
Control Room Staff																			
P.F.C. Officers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
G.F.C. Officers	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
F.C. Officers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S.F.C. Operators	4	1	1	1	4	4	4	5	1	3	5	5	8	1	4	1	15	3	2
L.F.C. Operators	4	1	—	—	4	—	4	—	4	—	4	—	4	—	2	—	33	4	30
F.C. Operators	8	2	9	9	12	6	9	8	8	8	16	3	13	5	2	2	36	3	29
Totals	17	5	12	15	21	6	18	—	17	1	30	4	25	8	3	16	203	27	174
Part-time Retained																			
Station Officers	3	—	—	—	2	2	11	11	13	13	5	4	8	8	8	8	49	46	—
Sub Officers	14	12	16	—	8	8	34	36	28	28	25	25	56	51	16	16	200	192	—
Leading Firefighters	17	17	20	—	10	10	57	61	56	53	32	32	67	65	39	39	290	297	—
Firefighters	136	131	153	—	92	74	358	337	297	282	233	224	518	493	182	182	2,028	1,876	—
Totals	170	160	189	—	112	94	460	445	394	376	295	285	649	617	245	245	2,367	2,411	11
Part-time Volunteer																			
Assistant Divisional Officers	—	—	—	—	—	—	—	—	6	6	—	—	—	—	—	—	6	6	—
Station Officers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sub Officers	—	—	—	—	—	—	3	3	98	97	—	—	—	—	1	1	101	101	1
Leading Firefighters	—	—	—	—	—	—	4	4	85	85	—	—	—	—	—	—	121	117	—
Firefighters	24	12	11	1	—	—	25	21	993	794	—	—	26	26	43	43	1,331	1,087	19
Totals	24	12	13	1	—	—	32	28	1,182	982	—	—	265	232	44	44	1,559	1,311	20
WHOLETIME CONTROL ROOM	240	239	97	—	382	377	311	308	95	95	721	687	2,231	2,231	401	401	4,486	4,435	4
PART-TIME RETAINED	170	160	189	—	112	94	460	445	394	376	295	285	649	617	245	245	2,367	2,411	11
PART-TIME VOLUNTEER	24	12	13	1	—	—	32	28	1,182	982	—	—	265	232	44	44	1,559	1,311	20
GRAND TOTALS	451	416	299	16	515	477	821	781	1,688	1,454	1,046	976	3,212	3,088	693	693	8,815	8,184	209

SUMMARY OF FIRES AND SPECIAL SERVICES WHICH HAVE OCCURRED 1990

Table 3

	Total Fires	Classification of fires by number of pumps used for firefighting purposes:						Chimney Fires	Secondary Fires	False Alarms			Special Service	Total
		(a) 1 pump	(b) 2 pumps	(c) 3/5 pumps	(d) 6/10 pumps	(e) 11/15 pumps	(f) Over 15			Good Intent	Apparatus Fault	Malicious		
Central	845	746	88	10	1	—	—	372	745	761	581	623	256	4,183
Dumfries and Galloway	447	396	44	7	—	—	—	434	202	395	104	255	244	2,081
Fife	1,143	1,113	29	—	—	1	—	561	1,346	842	535	707	392	5,526
Grampian	1,569	1,315	161	87	6	—	—	1,103	1,129	1,296	456	530	677	6,760
Highland and Islands	735	627	79	29	—	—	—	1,717	556	632	147	259	422	4,468
Lothian and Borders	3,977	2,638	701	635	3	—	—	735	4,091	3,703	1,183	3,724	1,072	18,485
Strathclyde	9,942	8,803	953	174	9	3	—	1,893	12,271	8,366	4,769	8,179	3,792	49,212
Tayside	1,752	1,559	183	10	—	—	—	560	2,524	1,169	462	964	617	8,048
Total	20,410	17,197	2,238	952	19	4	—	7,375	22,864	17,164	8,237	15,241	7,472	98,763

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FATALITIES (Listing Age Groups and Locations) during 1990

Table 4

FIRE BRIGADE	Age Groups										Location—Building Type etc.													Monthly Summary													
	Up to 5 years	6 to 16 years	17 to 40 years	41 to 60 years	61 to 75 years	Over 75 years	Total Fatalities	House	Flat in Block	Flat in Terrace	Flat Over Shop	Caretaker's Flat	Hotel/Boarding House	Hospital/Home/Hostel	Caravan/Mobile Home	Vehicle	Industrial Premises Factory etc.	Commercial Premises Shop etc.	Place of Public Entertainment	Outside Area	Miscellaneous	Total	January	February	March	April	May	June	July	August	September	October	November	December	Total		
	—	—	—	3	1	—	4	—	4	—	—	—	—	—	—	—	5	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Central	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	4
Dumfries and Galloway	—	1	1	2	4	—	8	3	—	—	—	—	—	—	—	5	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Fife	—	—	1	1	2	1	5	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	2	—	—	5	
Grampian	—	—	2	6	2	1	11	5	6	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	3	2	—	—	—	—	—	—	—	—	11	
Highland and Islands	—	—	—	—	—	—	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	—	—	—	—	—	—	—	—	6	
Lothian and Borders	—	—	6	6	6	4	22	3	12	5	—	—	—	—	—	1	—	—	—	1	—	2	—	—	2	2	2	—	—	1	—	—	2	—	—	22	
Strathclyde	2	—	15	25	20	11	73	10	43	17	—	—	—	—	—	2	—	—	1	—	—	6	—	—	9	6	—	—	4	5	5	13	2	7	73		
Tayside	—	—	1	2	1	—	4	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1	—	4		
Totals	2	1	29	47	37	17	133	30	69	24	—	—	—	—	—	8	—	—	—	2	—	16	16	16	16	16	—	—	10	5	9	16	9	12	133		



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