



THE SCOTTISH OFFICE

Home and Health Department

**Her Majesty's Chief
Inspector of Fire
Services for Scotland**

Report for 1991



SCOTTISH OFFICE HOME AND HEALTH DEPARTMENT

Her Majesty's Chief Inspector of Fire Services for Scotland

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Presented to Parliament by the Secretary of State for Scotland
by Command of Her Majesty
14th July 1992

Report 1991

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 1991.

I have the honour to be,

Sir,

Your obedient Servant,

A WINTON

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SECTION A: GENERAL

Introduction

1. This report deals with events associated with and affecting fire brigades in Scotland for the calendar year 1991.
2. At Appendix 1 is a map of Scotland delineating the area covered by each brigade and a summary with details for each brigade of the area in hectares, the population, the population per hectare, the number of wholetime and retained fire stations and volunteer units and the operational fleet.

Inspections

3. A full programme of inspections of the eight Scottish fire brigades and the Scottish Fire Service Training School was carried out during the year and the formal inspections were supplemented by visits to brigades by members of the Inspectorate to give advice on particular matters.
4. The normal pattern of making verbal reports to fire authorities was repeated and this provided the opportunity for a valuable exchange with members of fire committees and fire boards on the development and progress of their brigades. This enabled me to emphasise the important role which local authorities can play in increasing public awareness of the dangers from fire and in helping to reduce fire deaths in Scotland.
5. In view of the developing public interest in the work of The Scottish Office Inspectorates, consideration is being given to publishing the reports prepared by the Fire Service Inspectorate following annual inspections of the various Scottish fire brigades. The Citizen's Charter has encouraged reports by the main Inspectorates for public services to be written in non-technical terms and to be made more widely available, and I consider there are advantages in making my fire brigade inspection reports, which for the most part demonstrate a high level of competency, operational efficiency and management in brigades, available to the public.
6. The Fourth Report, Session 1988-89, Home Office Expenditure (HC 314) of the Home Affairs Committee published in June 1989 recommended the development of a national matrix of output measures and performance indicators to measure the effectiveness and efficiency of the fire service. Home Office, with the assistance of consultants and a working group which included representatives from 7 fire brigades in England and Wales, developed a set of indicators for fire brigades. These were subjected to a practical trial which ended in October 1991. Refinements to the scope of the system are being considered with a view to identifying the most useful common indicators for brigade management. The Scottish Office Home and Health Department continues to monitor progress on these developments and will be considering their relevance to the Scottish position.

Fire Service Inspectorate

7. There was a change in the establishment of the Inspectorate with the reduction of one in the number of Assistant Inspectors. The National Health Service Community Care Act 1990 removed Crown immunity from health service premises, resulting in certification of health service premises becoming the responsibility of fire authorities on 1 April 1991. Consequently the Fire Inspectorate ceased to be the responsible agency for this work and, as a result of this considerably reduced workload, the Inspectorate establishment was reduced by one Assistant Inspector rank.

8. The Fire Service Inspectorate establishment is as follows:

HM Chief Inspector	- 1
HM Inspector, Grade II	- 1
Senior Assistant Inspector	- 1
Assistant Inspectors	- 2
Staff Officer	- 1.

Firemasters and Fire Authorities

9. At the end of the year the following Firemasters were in post:

Central:	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 QFSM GIFireE
Lothian and Borders:	Firemaster P D Scott MIFireE
Strathclyde:	Firemaster J Jameson FBIM
Tayside:	Firemaster D Marr MIFireE.

10. Following the retiral early in the year of Firemaster C B Halliday, Deputy Firemaster J Jameson was appointed Firemaster of Strathclyde Fire Brigade. There have been 3 new appointments at Deputy Firemaster level: in Tayside Mr Robertson, Senior Divisional Officer, Strathclyde succeeded Mr Marr; in Strathclyde Mr Robbie, Assistant Firemaster, succeeded Mr Jameson; and in Dumfries and Galloway Mr Gallacher, Divisional Officer succeeded Mr Tucker who transferred to Hertfordshire Fire and Rescue Service.

11. I take this opportunity to record my sincere thanks to Firemasters and all members of brigades for their cooperation with the Inspectorate during the year, to congratulate newly appointed senior officers and to thank retiring members for their valuable service to the community in Scotland.

Honours and Awards

12. The following received recognition in The Queen's Honours Lists:

Member of the British Empire

HC Hunter GIFireE, Assistant Firemaster, Strathclyde Fire Brigade

Queen's Fire Service Medal

Firemaster D Grant GIFireE, Highland and Islands Fire Brigade

British Empire Medal

D McFie, Retained Station Officer, Strathclyde Fire Brigade.

Fire Brigade Long Service and Good Conduct Medal

Awarded to 212 members of the Scottish Fire Service.

13. I was pleased to be able to attend the presentation of the award of The Queen's Fire Service Medal to Firemaster Grant and to present a number of Long Service and Good Conduct Medals during visits to Brigades. I offer my sincere congratulations to all those whose service was recognised by awards in 1991.

SECTION B: PERSONNEL AND ADMINISTRATION

Establishments and Strengths

14. The establishments and actual strengths of brigades are shown at Appendix 2.

Wholetime Personnel (Operational)

15. The total establishment figure for wholetime operational members of Scottish brigades as at 31 December 1991 was 4,528, an increase of 42 over the previous year's figure with the main areas of increase being in Grampian (13) and Lothian and Borders (28). The actual strength of brigades was 4,426, making a difference between establishment and number actually in post of 102. Having in mind, however, that brigades normally have personnel ready to join the first recruit training course in 1992, the difference between the figures is not seen as a cause for concern. All brigades have, over a period of years, been staffed at or near their wholetime establishment figures and the overall pattern for both establishment and strength figures has remained broadly constant over the years. No problems were experienced in attracting a sufficient number of suitable personnel to fill vacancies that arose in wholetime establishments, although the number of females and number of ethnic minorities who applied to join the fire service was disappointing. The number of serving female wholetime firefighters increased to 5, with Central joining Fife, Strathclyde and Tayside in having wholetime female firefighters on their strength.

16. During the year 171 wholetime operational persons left the service for a variety of reasons, a decrease of 1 over the previous year's figures. One hundred and sixty one firefighters joined the service in 1991, an increase of 5 over 1990. Details of gains and losses of personnel by brigade are shown in Appendix 3.

17. Retirement on medical grounds again increased, rising to 114 - 16 as a result of failing the over 40 medical and 98 retiring on medical grounds other than the over 40s medical. The table below shows a breakdown of personnel retiring from the service since 1985.

	1985	1986	1987	1988	1989	1990	1991	Totals
Retiring on pension	30	42	47	40	42	33	29	263
Retiring as a result of failing over 40 medical	3	7	4	3	4	12	16	49
Retiring on medical grounds other than as a result of failing over 40 medical	54	58	59	57	70	92	98	488

18. Supporting guidance issued with the Fire Services (Appointments and Promotion) (Scotland) Regulations 1989 outlined steps brigades should take to improve the general level of fitness of firefighters. To date, most Scottish brigades have either introduced or are in the process of introducing fitness training as part of normal watch training. Five brigades have introduced occupational health schemes, while others are actively pursuing this matter.

Retained and Volunteer Personnel

19. Retained and volunteer establishments at 31 December 1991 and the previous 4 years are shown below:

	Retained		Volunteer	
	Establishment	Actual Strength	Establishment	Actual Strength
1987	2,585	2,369	1,530	1,351
1988	2,561	2,364	1,560	1,358
1989	2,561	2,395	1,536	1,387
1990	2,567	2,422	1,559	1,331
1991	2,549	2,378	1,559	1,305

20. Although there was a reduction of 44 in the number of retained firefighters in post at 31 December 1991, the number recorded (2,378) is in line with the average for the previous 4 years. While the number in post is still satisfactory, brigades are reporting that it is becoming ever more difficult to recruit retained personnel who can provide fire cover during the working day. This has resulted in a number of pumps not being crewed during these hours. To date, satisfactory fire cover has been maintained by mobilising the next nearest wholetime or retained station.

21. Strathclyde Fire Brigade reduced the number of their retained units by 3 with the disbandment of units based on the wholetime stations at Kilmarnock, Cumbernauld and Kirkintilloch. The disbandment of these units, however, should have no adverse effect on the standards of fire cover provided for these areas.

22. The number of volunteers in post at 31 December 1991 (1,305) is the lowest recorded for some time and this would appear to reflect the difficulties experienced by brigades who have to rely on this type of fire cover. The numbers of people who reside in remote areas, who are capable of fulfilling the physical standards necessary to enable them to carry out firefighting duties and who have the time to devote to public service are very limited.

23. There are 17 retained and 22 volunteer female firefighters on brigade strengths.

Control Room Staff

24. The establishment figure at 31 December 1991 for control room staff is 203 and the number in post is 201, the same figures as last year.

25. Three brigades have decided that their existing control facilities are inadequate to meet modern requirements and are actively pursuing the provision of new premises. Modern control suites require premises which have sufficient room for housing mobilising equipment and for operators to work in comfortably, and which are provided with lighting, heating, ventilation and furnishings which are compatible with modern computer technology. Likewise, there is a requirement for reasonable staff areas and offices for use by control staff. Brigades will be assisted with their development plans by the Logica Report on the next generation of Fire Brigade Mobilising Systems.

Equal Opportunities

26. A considerable amount of work remains to be done in promoting and implementing equal opportunities in the fire service in Scotland. The Department's commitment to equal opportunities in the fire service, regardless of gender or race, was demonstrated by the issue of Fire Service Circular No 5/1990 in April 1990 which provided detailed guidance on the establishment, development and implementation of equal opportunities

policies by fire authorities in Scotland. The Circular encouraged fire authorities to develop a written statement of their equal opportunities policies, to publicise such statements throughout brigades and to issue copies to all new staff; asked fire authorities to review their existing policies and procedures; and suggested that fire authorities should ensure that they have information, either locally or centrally, which will help them measure the effectiveness of those policies (especially in the critical areas of recruitment, selection and promotion). The Department will continue to monitor progress on equal opportunities by fire authorities. The Central Fire Brigades Advisory Councils, in recognising the importance of this subject, agreed by the end of 1991 to set up a Joint Committee on Equal Opportunities. The aims of the Committee will be to examine barriers preventing equal opportunities within the fire service, devise objectives for assessment of the effectiveness of authorities' policies, monitor progress against those objectives, and assist in achieving an exchange of information relating to developments in this field.

Health

27. The proportion of days lost by all brigades in 1991 due to sickness of wholetime personnel was 5.65%, which is in line with sickness recorded in previous years. As usual, the figures include long-term absences due to sickness which have a disproportionate effect on the percentage figures submitted by brigades. Below is a table showing the proportion of days lost for Scottish brigades over the last 10 years:

Year	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
%	5.13	5.12	4.39	4.50	5.13	4.50	5.00	5.00	5.67	5.65

28. I referred in my Report for 1990 to the report of the working party set up to discuss conditions of service matters raised by the Audit Commission's Occasional Paper No. 1 on value for money in the fire service. The report recommended, with regard to sickness in the fire service, that HM Inspectors should monitor the levels on a systematic basis and encourage fire authorities to address apparently excessive levels and that those brigades which do not have occupational health schemes in place should consider their introduction.

29. These matters were brought to the notice of brigades during inspections. All brigades now have systems in place to monitor sickness levels and, in the case of brigades which do not yet have occupational health schemes, this matter was raised with both the Firemaster and the Committee responsible for the provision of fire services.

30. In 1991 brigades were asked to provide details of fatalities and serious injuries affecting operational personnel. This exercise, which will be continued in future years, showed that 63 wholetime and 7 retained firefighters were seriously injured during the year, serious injury being defined as "an injury which resulted in a firefighter being absent from duty for more than one month or hospitalised for 2 weeks". Of the total number of personnel categorised as seriously injured, 21 injuries were sustained while fire-fighting; one at a special service call; 22 during training; and 26 involved in other duties. I am pleased to report there were no fatalities among fire service personnel as a result of brigade activities.

Discipline

31. During the year 24 members of brigades were charged with offences under the Fire Services (Discipline) (Scotland) Regulations 1985 and 32 charges were made. This compares with the previous year's figures of 14 and 30 respectively.

32. Punishments awarded were:

Reduction in rank	- 1
Requirement to resign as an alternative to dismissal	- 1
Stoppage of pay	- 8
Reprimand	- 3
Caution	- 8
Summary dismissal	- 1

33. In addition to the above awards, 2 members of the service resigned voluntarily prior to a hearing being arranged and 4 members were discharged for misconduct other than by way of the Disciplinary Regulations.

Pensions

34. The Firemen's Pension Scheme (Amendment) Order 1991 amended the Firemen's Pension Scheme to introduce a death-in-service grant in respect of regular firefighters. The grant is equal to 2 years pensionable pay, that is at the rate payable at the date of the person's death. The costs have been met by increasing the employee contribution rate from 10.75% to 11% of pensionable pay, with effect from 1 July 1991. Entitlement to the grant arises from the death on or after the inception date of firefighters who are members of the Firemen's Pension Scheme at the time of death. Payment is normally made to the person's spouse or, where there is no legal spouse, to the estate.

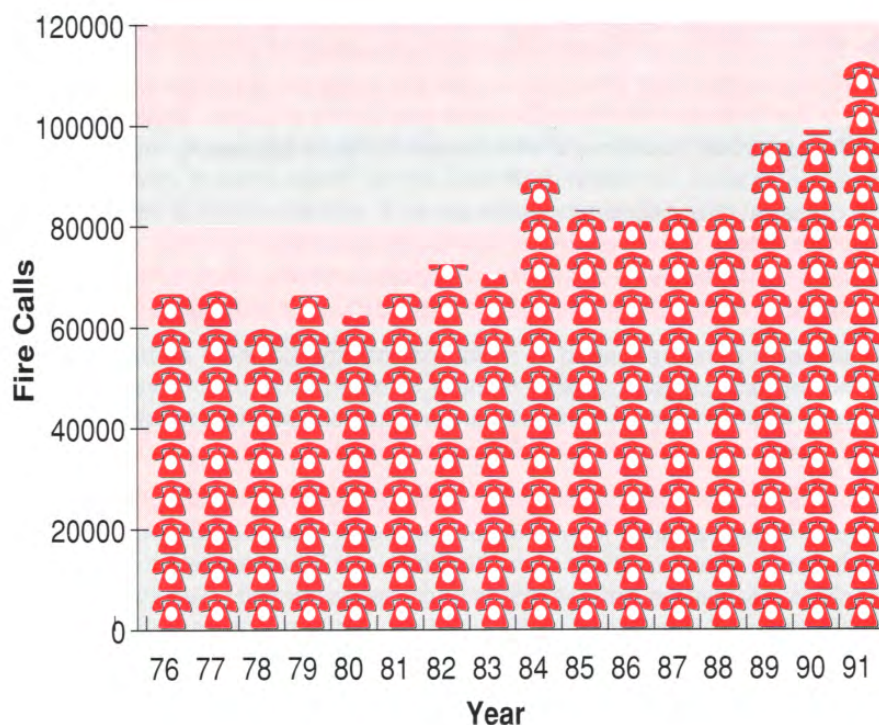
SECTION C: OPERATIONAL

Fires and Other Emergencies

35. There was a further marked increase in the work load of Scottish fire brigades in 1991, the total number of calls received being 112,196 - an increase of 13,433 over the previous highest recorded figure of 98,763 in 1990. The increased work load should be seen against the steady rise in the number of emergency calls received by brigades since the formation of the present Scottish fire brigades following local government reorganisation in May 1975.

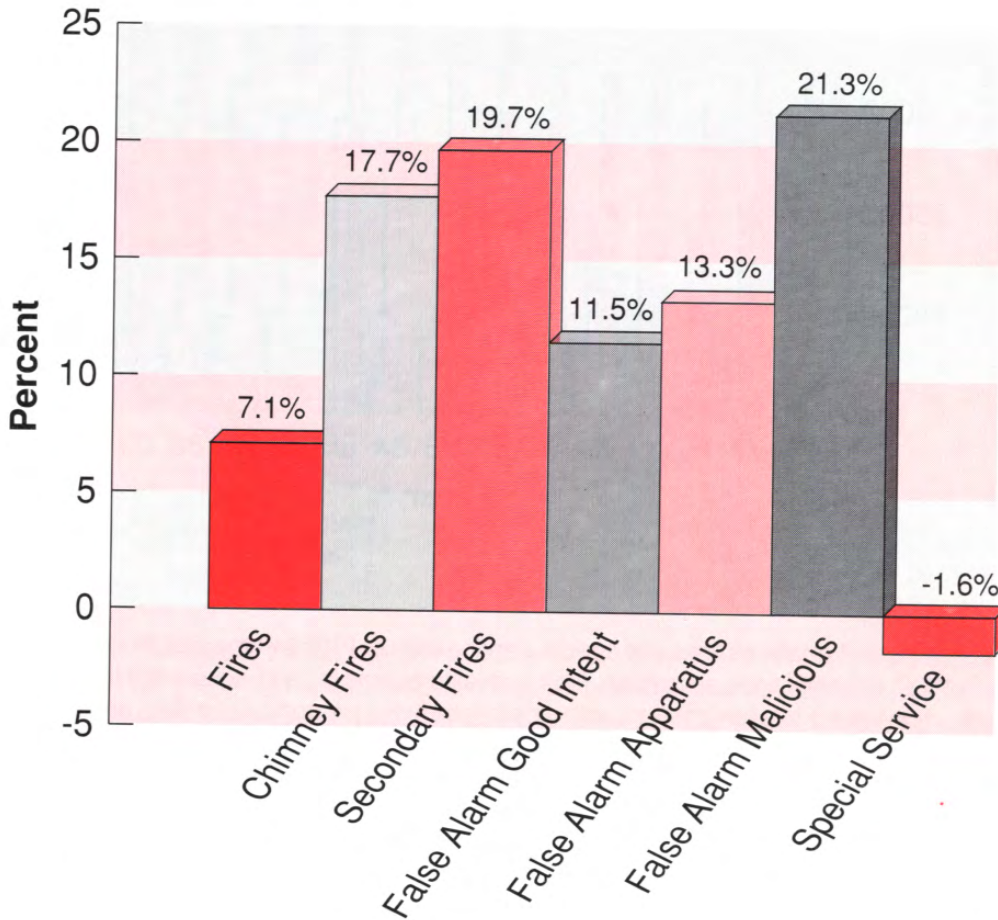
36. The increase in the number of calls since figures were recorded in 1976 is illustrated in Graph 1 below.

Graph 1 - TOTAL CALLS TO SCOTTISH BRIGADES



37. A detailed breakdown of the number and types of call in 1991 is shown in Appendix 4 illustrating each brigade's work load in 7 categories and indicating the relative size of the fires attended by the number of pumps required to extinguish them. Comparison with the equivalent tables for 1990 shows an increase in all categories except special services, where there was a slight decrease. Graph 2 on page 13 shows percentage increases/decreases between 1990 and 1991.

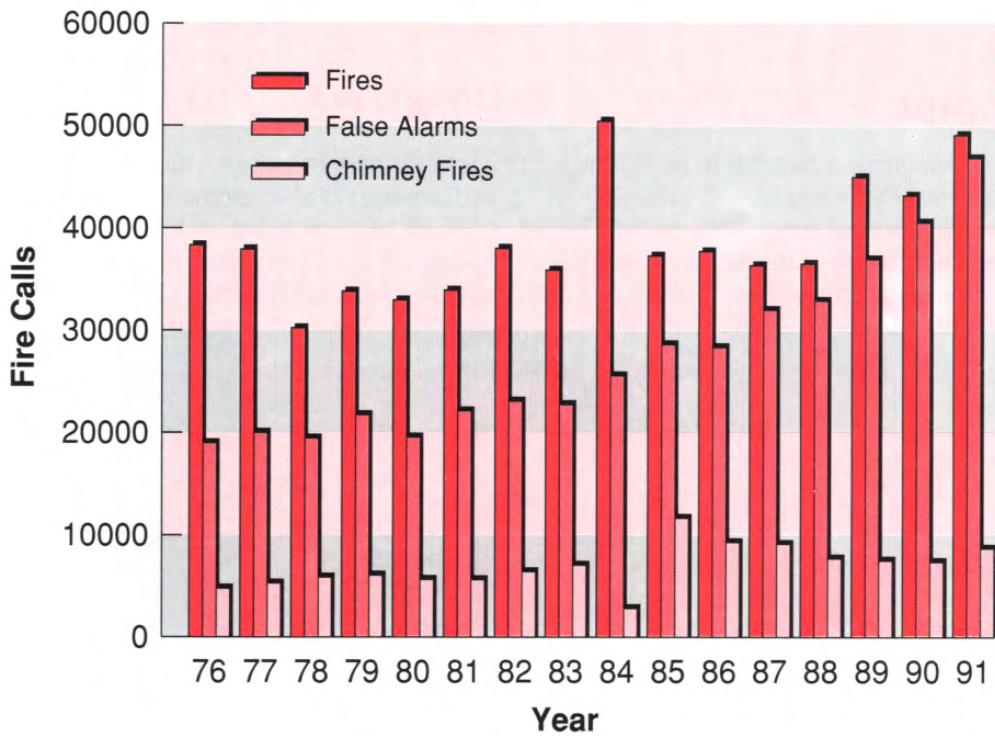
Graph 2



38. Appendix 5 shows a list of all fires in monthly order which required an attendance of 6 or more pumping appliances to contain them.

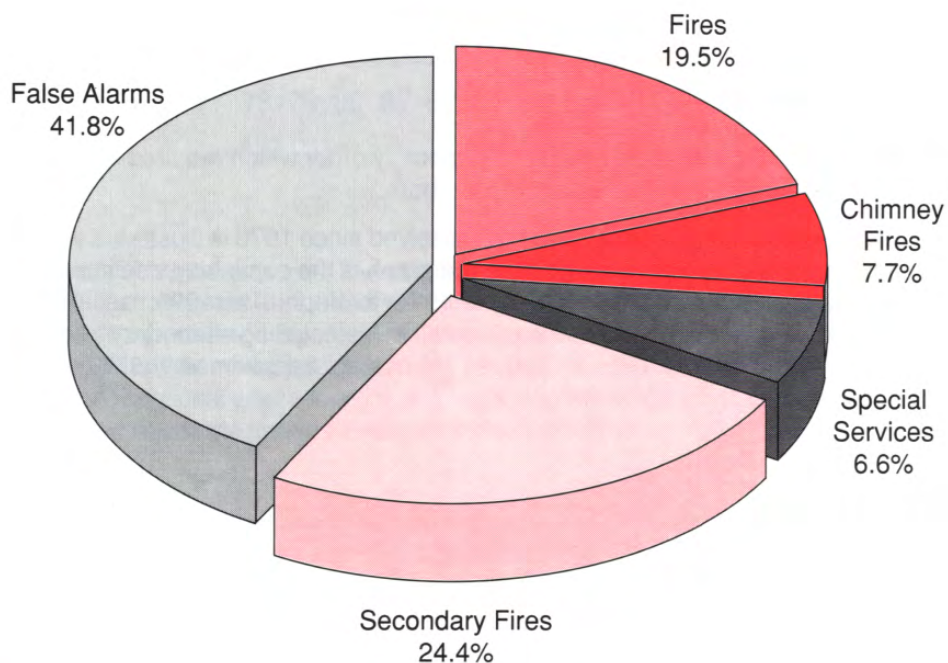
39. A breakdown of the types of fire call received since 1976 is illustrated in Graph 3. The most important trend to emerge from the graph is the continuing rise in the number of false alarm calls - up from 18,994 in 1976 to 46,944 in 1991, an increase of approximately 147%. Over the same period all fires, including secondary and chimney fires, have risen from 42,111 to 57,896, an increase of approximately 37%.

Graph 3 - BREAKDOWN OF CALLS



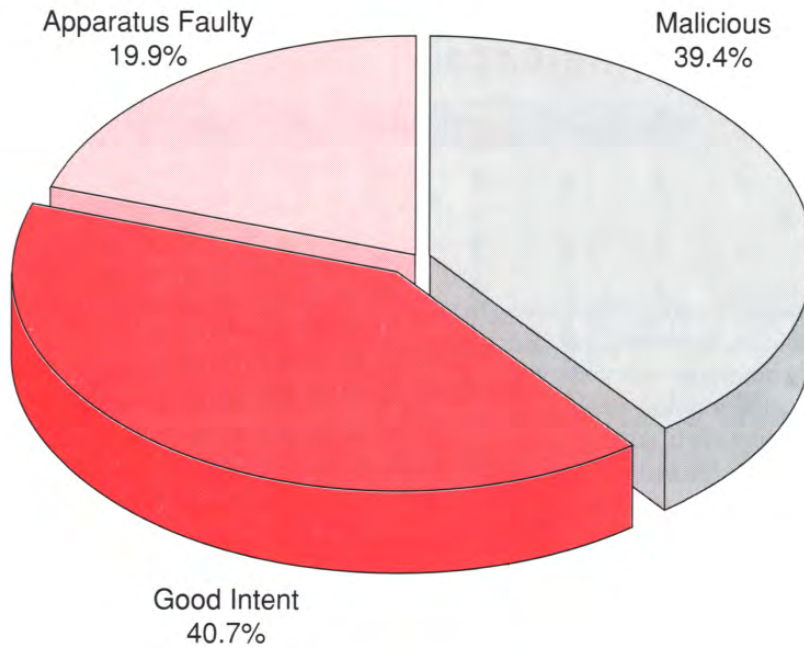
40. Graph 4 analyses fires and special service calls in 1991 by type of call. Compared with 1990, chimney fires, secondary fires and false alarms in 1991 accounted for greater proportions of the total calls figure, with a decrease in the proportions for fires and special service calls. Comment was made last year that for the first time false alarm calls exceeded 40% of the total work load of brigades. Unfortunately there has been no slowing down in the increase of this type of call.

Graph 4 - TYPE OF CALL



41. The proportions of different types of false alarms during the year are illustrated in Graph 5. Compared with 1990 details, good intent and apparatus faults calls show decreases but the proportion of malicious calls increased by nearly 2 %.

Graph 5 - FALSE ALARMS



42. The increase in the number of malicious calls, up by over 21% compared with the previous year's figure, is again disappointing. As stated in last year's report, it was the view of the Joint Working Party on the Audit Commission's Occasional Paper No. 1 that the most effective means of deterring potential offenders was the provision of communications systems which improve the means of identifying the source of the call. To date, approximately 50% of telephone exchanges in Scotland covering approximately 54% of telephone users, are provided with digital equipment and it is expected that this programme will be completed by 1994. While it is not yet possible to evaluate the benefits that may flow from the provision of digital exchanges, they still appear the best option to reduce the number of malicious calls received by the fire service.

43. The number of times fire appliances and crews were harassed while attending normal operational incidents has increased over the past year and in some areas, it was necessary on occasion, for the police to be in attendance to ensure the protection of firefighters. While crews have in the past been harassed while attending certain bonfire incidents, the present trend of physical attacks on firefighters and fire-fighting vehicles gives cause for concern. There has been a number of instances where it appears attempts have been made to ambush crews attending fires in derelict and unoccupied buildings but, although some firefighters have received injuries, there have been no cases recorded to date of firefighters being seriously hurt as a result of these actions. In areas where these attacks have taken place, Firemasters have issued instructions to operational crews on how they should proceed and every attempt has been made through liaison with local communities to improve the relationship between the fire service and the public it serves.

Fatalities

44. The total number of fatalities recorded by brigades increased from 133 in 1990 to 139 in 1991, with the majority of deaths (122) occurring in domestic dwelling premises. Ten people died as a result of vehicle fires and the remaining 7 were in industrial or commercial premises. The 122 domestic dwelling fire fatalities resulted from 103 fire incidents of which 11 were multiple fatalities accounting for 30 victims. Below is a table showing fire deaths by brigade over the last 10 years.

FIRE DEATHS BY BRIGADE

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Central	4	5	9	5	9	17	11	4	4	9
Dumfries and Galloway	2	4	2	8	2	4	7	1	8	3
Fife	3	7	7	6	9	12	11	6	5	7
Grampian	9	12	8	18	11	12	12	12	11	11
Highland and Islands	8	11	10	11	9	5	10	9	6	12
Lothian and Borders	25	26	26	23	29	21	26	19	22	18
Strathclyde	78	72	89	89	87	83	69	56	73	72
Tayside	13	18	13	11	9	14	4	6	4	7
Total	142	155	164	171	165	168	150	113	133	139

45. Of the 103 domestic dwelling fires in which people died, 78 had no smoke alarms installed. Subsequent investigation indicated that in most of these incidents early warning of fire would have given the victims an improved chance of survival and could have saved lives. While 23 of the premises where fire deaths occurred had smoke alarms fitted, it is worth noting that in 9 instances the batteries had been removed rendering the apparatus inoperative and there were **contributory factors** in the other 14 cases. Two premises were so badly damaged that it was not possible to establish whether or not a smoke alarm had been fitted.

46. An analysis of fatal domestic dwelling fires, highlighting contributory factors, showed that in 35 of the fires alcohol and drugs featured prominently; in 32 instances the products of combustion from ignited polyurethane foam-filled furniture worsened the fire situation; disability affected 10 of the fatalities' chance of survival; and in 24 incidents the fact that the person lived alone was a major contributory factor. Smoking materials and their careless disposal was a source of ignition in 20 of the 103 incidents.

47. Once more the younger and elder members of the population contributed the highest numbers of the total with 19 children under 5 years of age and 55 persons over the age of 60 losing their lives.

48. Brigades recorded 10 fatalities attributed to fire following vehicle accidents. While this may be a small number of the total death toll on the roads, it is nevertheless a cause for concern that drivers or passengers may have survived the impact of a collision only to lose their lives trapped in the ensuing fire.

49. Details of fire fatalities analysed by age groups, location and months of occurrence for each brigade are shown in Appendix 6.

Rescues

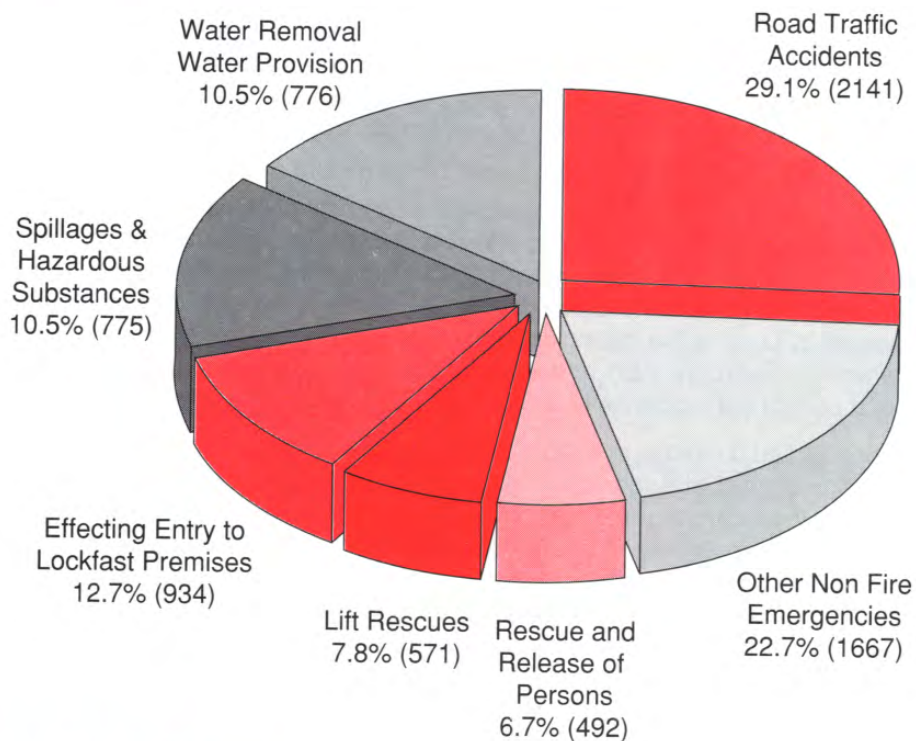
50. The number of persons rescued from fire situations was 654; from other dangerous situations where no fire was involved 987; and from road accidents 817. The table below shows comparative figures for rescues over the past 5 years.

Rescues	1987	1988	1989	1990	1991
Fires	579	685	659	766	654
Other dangerous situations where no fire involved	899	711	495	526	987
Road accidents	566	704	819	886	817

Special Services

51. An increasing proportion of fire service calls over the years are for special services, non-fire situations where fire brigade expertise and equipment is required to render humanitarian services when requested by police, ambulance or members of the general public. Scottish brigades attended a total of 7,356 of these non-fire calls during 1991. Graph 6 shows the percentage and number of calls in each main group. A total of 1,804 persons were rescued from incidents encompassed by this category of fire service work.

Graph 6 - SPECIAL SERVICES



Road Accidents

52. The consistent rise in the number of road accidents attended by brigades has been reversed with a slight reduction being recorded in 1991 when there were 2141 attendances compared to 2170 in 1990. Although there were several serious road accidents, there were no multiple crashes involving large numbers of vehicles as witnessed several times

throughout the year in England and Wales. Although brigades in Scotland have the equipment and expertise to deal with such situations, it is to be hoped that they will never be called upon to use them.

Fire Damage in the UK

53. Figures obtained from the Association of British Insurers indicate the estimated monetary fire loss for the United Kingdom in 1991 to be £1,018 million. Separate figures for Scotland are not available. Corresponding figures for the previous 3 years are:-

1988	£ 645.9m
1989	£ 792.4m
1990	£1,005.2m

54. Even allowing for inflation, the cost of fire damage throughout the United Kingdom is continuing to rise to an unacceptable level. Bearing in mind the increase in the overall work load of Scottish brigades and, in particular, the steady rise in the number of fires which required 6 or more pumping appliances to contain them (up from 23 in 1990 to 38 in 1991), there is no reason to suggest that the rise in the cost of fire damage in Scotland is not in line with that for the rest of the United Kingdom

55. An important factor in this is the ever increasing number of fires which are considered to have been the result of criminal fire raising acts. The number of such incidents over the past 5 years for which figures are available shows a steady increase:

1986	1987	1988	1989	1990
2,761	2,829	2,963	3,492	3,506

56. Although figures are not available for 1991, preliminary information received from brigades suggests there is little hope of a reduction in the figure for the year under review.

57. All fires are fully investigated by fire officers to ascertain the cause. If a criminal fire raising act is suspected, officers can call upon the services of specialist fire investigation teams which operate within every Scottish brigade to assist them with their investigations. These teams of specially trained fire officers work in close liaison with the police and forensic scientists.

58. Against this background of the increase in the number and cost of fires attributed to criminal fire raising acts, the Home Departments and the Association of British Insurers established the Arson Prevention Bureau in 1990. The setting up of the Bureau was the key recommendation of a Home Office committee of enquiry into the rise in the number of fires caused by criminal fire raising acts throughout the United Kingdom. The Bureau began its work in February 1991 and intends to spearhead a programme of action to prevent and control the incidence of arson/fire raising nationwide.

59. During its first 6 months in operation the Bureau, working in conjunction with the fire service through the Chief and Assistant Chief Fire Officers' Association and the police service through the Association of Chief Police Officers, has undertaken a comprehensive survey into current procedures for the investigation of fires. A report on how to achieve greater effectiveness in fire investigation and identification of wilful fire raising will be issued for the benefit of fire brigades and police forces by the end of 1992. The report will also consider how best use can be made of forensic science services in the detection of crimes involving fire.

60. In England and Wales the offence of arson generally covers all criminal fire raising acts, whereas under Scots law the same offences are categorised as culpable, reckless, wilful or malicious fire raising.

SECTION D: SUPPLIES AND SERVICES

Transport

61. The number of pumping appliances in service with brigades shows little change over the years apart from the trend of fewer reserve appliances being held because of improving standards of replacement of front line vehicles. All brigades have an agreed replacement policy for pumping appliances of between 10 to 12 years with consistent progress being made in achieving individual replacement targets. With one exception, all brigades were able to purchase their average number of replacement vehicles in 1991. In the case of Lothian and Borders which had been trialling new chassis over the past year, it is intended that, once they have decided which chassis is most suited to their particular needs, they will resume a normal replacement purchasing programme of appliances.

62. The replacement of pumping appliances on a programmed basis has been achieved despite restrictions on spending programmes. Assuming existing replacement levels can be maintained, the pumping appliance fleets of Scottish brigades should continue to operate at a satisfactory level. Fire appliances are normally built on ordinary commercial vehicle chassis adapted for brigade use and suppliers of these chassis place a limit on how long they can provide spares. Therefore, it is essential for a variety of reasons, including the operational use of fire-fighting vehicles, that appliances are replaced at regular intervals.

63. In view of the possible implications of the effects of compulsory competitive tendering for the maintenance of fire service vehicles, most brigades have carried out a review of their workshop practices and procedures. This is to ensure that if the provision of vehicle maintenance is exposed to competitive tendering, then brigade workshop practices would be developed to a degree that would enable them to compete with the best that may be available in the private sector. There is a high standard of provision in this area in all Scottish brigades and, because of the complexity of maintaining fire-fighting vehicles and equipment, brigades believe it would be in the best interests of the service if this work was to remain within their direct control.

Uniform

64. There has been little change in the provision of fire-fighting uniform during the year. Trials are continuing with regard to a new helmet design, the longer bunker coat style fire tunic, and a variety of waterproof/chemical retardant leggings and overtrousers.

65. The Health and Safety Commission recently published for comment proposals for draft regulations and accompanying guidance which would implement, in the United Kingdom, the requirements of the European Community Directive on the use of personal protective equipment at work. When the consultative process is completed and the regulations are published, they will form one of a series of regulations relating to the use of personal protective equipment which will affect the fire service as they will have a bearing on the design specification and use of personal protective clothing used by brigades.

Premises

66. While no new or replacement fire stations were opened during the year, the last phase of the Strathclyde Fire Brigade Headquarters refurbishment programme was finalised with the completion of the upgrading of the adjoining fire station. Likewise in Strathclyde an additional training complex with an area of 260 square metres was

provided at the Brigade Training Centre in Cowcaddens, Glasgow, and building work commenced on a replacement wholetime fire station in Kilmarnock and on a retained fire station in Dalry.

67. In Lothian and Borders work is well advanced on the building of a replacement wholetime fire station at Bathgate, while in Central a major refurbishment was carried out at the retained fire station in Larbert.

68. In Fife work commenced on the building of a replacement retained fire station at St Monans and work is due to start soon on the construction of a new control suite at Brigade Headquarters. Likewise in Tayside it is expected that the building of a new command and control centre will begin early in the new financial year. The new development is to take place near the fire station and Divisional Headquarters in Macalpine Road, Dundee. This new centre will replace the existing control suite located at Brigade Headquarters.

69. In Highland and Islands a large commercial garage complex was purchased during the year and work is underway to develop an area of the new complex to house Brigade workshops and stores. The next phase of this development will be the provision of a new command and control centre. When these projects are completed and workshops, stores and control are moved, it will relieve congestion at Brigade Headquarters.

70. In Dumfries and Galloway a major refurbishment was carried out at the retained fire station in Stranraer, and in Grampian work commenced on the first phase of installing fume exhaust extract systems in fire station appliance rooms. Moreover, work continued on the programme of replacing existing timber appliance room doors.

71. While all brigades have made progress throughout the year in replacing or upgrading a number of their premises, and on the whole brigade property is reasonably well maintained, it is disappointing to record that it has not been possible to begin work on a number of major projects which have been outstanding for some time. This includes: progress with regard to the provision of garage accommodation for volunteer units; the provision and replacement of a number of wholetime and retained fire stations which are long overdue; the upgrading or replacement of accommodation at brigade and divisional headquarters; and refurbishment work on a number of wholetime and retained fire stations.

Equipment

72. Each year manufacturers of equipment display their products at a number of conferences and exhibitions attended by fire service interests. While some of the equipment displayed is produced specifically for fire brigade use, much of it is designed for the industrial and commercial market. In addition to the displays and demonstrations, visits are made by representatives of the manufacturers to individual brigades which provide an opportunity for a more detailed examination of the various products.

73. While every advantage is taken by brigades of new developments which improve the capability and safety of crews, much of the equipment in use is basic and well proven. As with fire-fighting and rescue vehicles, equipment and tools must be ready for immediate use at full load with no prospect of failure. This is only made possible by rigorously adhering to programmes of regular and systematic testing using standard tests which have been nationally agreed. Such a system is essential to the confidence which crews must have in all their equipment and this is supported by the formal records of tests which are maintained by brigades.

74. Research and evaluation of new products available on the market is, however, a continuing feature and most brigades have a programme of appraising and assessing new innovations. It is standard practice that all new items of equipment have to be rigorously tested, examined and approved before being adopted for brigade use.

Water Supplies

75. While there is a steady increase in the number of hydrants in service and the programme of converting non-standard hydrants is still underway in those brigades which still have non-standard hydrants, the main activity in this field continues to be the regular testing and cleaning of existing hydrants and planning for new installations. In the case of installations of new water mains or the extension or replacement of existing mains, it is essential that brigades work closely with water authorities and developers to ensure the needs of the brigade are fully catered for.

Telecommunications

76. The Scottish Office Directorate of Telecommunications continues to support the communications' activities of Scottish fire brigades. The Spectrum regulation activities during the past year were mainly directed towards managing the evolution of existing brigade systems to give improved coverage and rectifying interference problems.

77. Additional hand portable radio equipment has been purchased by The Scottish Office for all brigades to use in major emergency situations when normal communications' resources could be inadequate, overloaded or out of action. Brigades also have access to 2 portable Inmarsat satellite telephone systems which were deployed earlier in the year for use by all emergency services in the event of a major incident in a Region where existing radio systems have little or no coverage.

78. Problems arising from 999 calls being misrouted to incorrect brigade control rooms continue to be pursued with the national telecommunications carriers at both local and national level.

79. Advice has been provided to fire brigades on the subject of "Emergency Text Telephone Services for the Deaf and Speech Impaired". Equipment standards have yet to be established and further work is necessary at a national level to define the responsibilities and costs of providing a national service.

80. A new scheme known as "Self Provided Systems Licence" has been introduced and associated equipment schedules have been produced to cover all radio communications items used by brigades.

81. Two companies which are major suppliers of mobilising equipment for fire brigades have given notice that they will not be in a position to maintain their equipment after 1994. Brigades which are affected by this are now taking steps to have alternative systems in operation by that date.

SECTION E - FIRE PREVENTION

Summary

82. Fire safety in the home continues to be the main thrust of publicity efforts, both nationally and by individual brigades, urging householders to take basic fire precautions and install and maintain smoke alarms.

83. Fire safety in domestic dwellings relies in the main on the activities of the occupants and too often fire tragedies occur which might have been prevented by following simple preventative rules.

84. There is an increasing awareness by members of the public of the value of installing smoke alarms in their homes. In the local authority field, many housing authorities have initiated programmes for the installation of smoke alarms in their housing stock and several authorities have virtually completed installations in all their dwellings.

85. While brigades continue to direct their main prevention publicity towards adult members of the community, increasing attention is being given to involvement with schoolchildren. All brigades have programmes or projects ongoing in schools with the active cooperation of both education authorities and teachers. The resources committed to fire prevention education range from dedicated teaching units, funded through urban aid in the large urban areas, to individual visits from fire prevention officers in the less populated parts of the country. In the long-term this should provide a sound community awareness of fire dangers, both in the home and place of work.

Inspection and Certification of Premises

86. During 1991 brigades in Scotland inspected a total of 78,906 premises for fire prevention purposes, reflecting an increase of 11,173 (16.5% on the number of inspections carried out in the previous year).

87. Nine thousand, seven hundred and twenty nine plans were submitted to the fire brigades for comment in 1991 - a decrease of 808 (7.7%) from the previous year.

88. In accordance with the Fire Precautions Act 1971 the number of fire certificates issued during the year was:

Factories -	283	(184)
Offices, Shops, etc -	993	(602)
Hotels and Boarding Houses -	124	(119)
	<u>1,400</u>	<u>(905)</u>

89. The figures in brackets represent the 1990 equivalent, reflecting an increase of 54% in the total number of certificates issued in comparison with the previous year's figures.

90. As well as issuing new certificates the following number of certificates were revised:

Factories -	306	(163)
Offices, Shops, etc	1,097	(485)
Hotels and Boarding Houses -	441	(372)
	<u>1,844</u>	<u>(1,020)</u>

91. This reflects an increase of 80.8% in the total number of certificates revised. Previous year's figures in brackets.

Education and Publicity

92. The Scottish Office Home and Health Department, as part of its 1990-91 fire safety campaign, promoted, over the Christmas and New Year period, a series of television commercials which encouraged the installation of smoke alarms. In addition Lord James Douglas-Hamilton MP, Minister for Home Affairs and the Environment at The Scottish Office, in a Christmas 1991 fire safety message to the Scottish public, urged extra care and vigilance over the festive season. The Department continued to supply the 8 Scottish brigades with publicity material for use in local campaigns.

93. Lord James Douglas-Hamilton also promoted the launch of National Fire Safety Week (14-19 October). The Week adopted the general slogan of "FIRE COSTS..." and, for the first time, each day in the week had its own theme which highlighted a different aspect of fire prevention. National Fire Safety Week was supported and promoted by brigades throughout Scotland.

Joint Fire Prevention Committee

94. The Committee met twice during the year and agenda items included proposed regulations to be made under Section 12 of the Fire Precautions Act 1971 to implement the fire safety provisions relating to places of work of 2 EC Directives (89/91/EEC and 89/654/EEC). The regulations are at a draft stage and are on target for completion during 1992 for initial operation on 1 January 1993.

95. The work on 2 guides concerning the Fire Precautions Act 1971 has been completed and the guides were published late 1991. The first is a revised edition of "Fire Precautions Act 1971 - Guide to Fire Precautions in Premises Used as Hotels and Boarding Houses Which Require a Fire Certificate." This replaces the guide which was issued by the Home Office/Scottish Home and Health Department in 1972. The guide incorporates current means of escape philosophy and current British Standards appertaining to fire safety matters. The second is a new guide: "Fire Precautions Act 1971 - Fire Safety Management in Hotels and Boarding Houses." The guide details management responsibilities and offers advice on fire safety matters. This guide is a joint publication issued by the Home Departments (The Home Office and The Scottish Office) and the Fire Protection Association.

Building Standards Advisory Committee

96. As stated in last year's report, the major revision of the Building Standards (Scotland) Regulations was completed last year and the primary document The Building Standards (Scotland) Regulations 1990 was laid before Parliament on 14 November of that year. The Regulations came into force on 1 April 1991. Since publication of the Regulations, a number of amendments has been considered, including the significant requirement for all new domestic dwellings to be fitted with smoke alarms. This addition to the Regulations is likely to come into force during 1992.

Health and Safety Executive (HSE)

97. During the year the Inspectorate were involved in the work of the Advisory Committee on Dangerous Substances which includes analysis of serious fires which are the subject of Health and Safety Executive reports. The Committee also deals with advice on regulations and codes of practice and general advice leaflets on dangerous substances.

National Fire Prevention Youth Quiz

98. Each year the Chief and Assistant Chief Fire Officers' Association organise the National Fire Prevention Youth Quiz. This event is sponsored by the Fire Protection Association Central Fire Liaison Panel.

99. The annual event is open to any youth organisations which wish to enter a team of 5, between the ages of 13 and 16 years. Based on fire related general knowledge and basic fire prevention, the aim is to create a greater awareness in young people of fire safety.

100. Each area holds local contests and the respective winners represent their host brigade.

101. This year the Scottish District Finals were held on Saturday 15 June at the College of Technology, Dumfries, hosted by Dumfries and Galloway Fire Brigade. In keeping with past years the teams, representing all 8 Scottish brigades, displayed enthusiasm and a high standard of knowledge.

102. On this occasion the Scottish winner was the 1st Methlick Scout Team, representing Grampian Fire Brigade.

SECTION F: TRAINING

Scottish Fire Service Training School

103. The School's main function continues to be the training of recruit firefighters for Scottish fire brigades and for the Northumberland Fire and Rescue Service which resulted in the provision of 3 16-week training courses for new entrants to the fire service. School resources are also used to provide additional courses to meet the needs of Scottish brigades and, when there is spare teaching capacity, courses for organisations such as the Prison Service and Health Board Hospital Fire Safety Officers.

104. During the year the following courses were held at the School with the number attending shown:

Recruits' Course	169
Wholetime Leading Firefighter	43
Breathing Apparatus Instructor	29
Specialist Legislation	29
Road Traffic Accident Instructor	10
Retained Firefighter	41
Retained Junior Officer	32
Retained Breathing Apparatus Operator	5
Retained Recruits	42
Hospital Fire Prevention	72
Prison Officers' Fire Prevention	20

105. The inspection of the School confirmed that high standards continue to be achieved with quality training being provided both in the lecture room and on the drill ground. The general standard of the premises remains satisfactory and the School is well provided with a variety of operational equipment compatible with that in use by brigades. Ancillary services continue to give excellent support to the core activities of the School. Full use has been made of improved video equipment and the inspection confirmed a marked improvement in the quality and variety of instructional aids, available to staff and students, which are helping increase understanding of some of the more technical aspects of fire engineering. The Commandant, Mr C F McManus QFSM BA MIFireE, continues to make a major contribution to the work of the School by constantly striving to improve the quality of the instruction and the assessment of the progress of students and by maintaining sound working relationships with fire authorities, the customers of the School.

Fire Service College

106. Brigades continued with a reasonable programme of attendance at College courses and seminars during 1991 and in virtually every case were awarded places for all nominations made. The number of students attending the College was 225, a reduction of 67 from the previous year. Numbers attending the College over the past 5 years are shown below:

Year	1987	1988	1989	1990	1991
No. Attending	283	342	353	292	225

107. While there has been a sizeable reduction in the overall number of students attending the College, it is interesting to note that over the same period the numbers who

have attended the following courses, which in the main form the progressive training system, have not decreased.

Course	1987	1988	1989	1990	1991
Junior Officer	45	62	65	59	-
Junior Officer Advancement	39	52	56	41	52
Specialist FP	14	19	21	21	18

108. Following restructuring of certain College courses, the Junior Officer Course was withdrawn and 2 new courses, the Watch Commanders' Course and the Junior Officers' Fire Prevention Course, were introduced. In 1991 41 students attended the Watch Commanders' Course and 11 attended the Junior Officers' Fire Prevention Course.

109. The College has over the past year introduced a number of new courses designed to improve the management skills of brigade officers. Courses in Employee Relations, Press and Public Relations Management, Project Management Skills, Equal Opportunities and Finance Management are examples of the new type of learning opportunities available that have been introduced. Scottish brigades have taken full advantage of these new developments with 35 student places being taken up.

110. The Department has supported involvement by personnel from fire authorities in Scotland on courses at the Fire Service College by continuing to provide funding to the Home Office to meet an agreed portion of College costs in financial year 1991-92.

111. The cost of travel and subsistence for attendance at the College, which is located in Gloucestershire, is a considerable burden on 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 the fire service in Scotland are not disadvantaged because of high travel costs.

112. With regard to fireground training, the College have obtained the use of a Vickers Viscount passenger aircraft and plans are being made to provide a training oil rig to further develop the facilities which are available at the College.

Brigade Training

113. All Scottish brigades continue to make full use of external courses available to them at the Fire Service College and the Scottish Fire Service Training School and this, taken in conjunction with training carried out at brigade and station level, should ensure that personnel, wholetime and retained, are receiving training which is suitable to their needs and to the location in which they carry out their duties. Brigades regularly review their respective programmes to encompass new techniques and procedures and to ensure personnel are kept fully apprised of the introduction of new equipment. An important area of this is the system used by brigades to record training carried out by individual firefighters. This recording is essential to enable supervisory officers to regularly review the implementation and development of training programmes.

114. At present the method of recording training varies from brigade to brigade and to some extent between wholetime, retained and volunteer members of the same brigade. The Joint Training Committee (JTC) of the Central Fire Brigades Advisory Councils is aware of this and is developing a standard method of recording all aspects of brigade training. It is expected that advice on this will be issued to the service when the JTC has completed its deliberations on this matter.

115. All Scottish brigades are involved in providing training services to outside agencies on a commercial basis. Examples of the diverse areas of training covered are the major involvement of Grampian with the oil industry; Dumfries and Galloway with crews for Sealink Ferries; Fife with industrial training for local petrochemical complexes; Central, with courses for prison staff; Lothian and Borders with courses for marine personnel; Tayside with local authority training; Highland and Islands with courses for staff employed

in fish factories; and Strathclyde in a wide variety of shipping and Regional Council training. Involvement in the training of industrial, commercial and local authority personnel not only develops brigade expertise in meeting the wide variety of courses required, but is also a means of bringing income into the brigade.

Fire Services Examinations Board

116. To be eligible for promotion to a higher rank, firefighters must be successful in examinations set by the Fire Services Examinations Board. Examinations for promotion to the ranks of Leading Firefighter and Sub-Officer have both written and practical elements while, for promotion to the rank of Station Officer, the examination consists of written papers only.

117. In Scotland 3 local boards administer both the written and practical examinations for the Fire Services Examinations Board with the practical tests for Leading Firefighter and Sub-Officer examinations taking place in the year following the written examinations.

118. In 1991 written examinations for Leading Firefighter, Sub-Officer and Station Officer were held in September, October and February respectively. Practical examinations for Leading Firefighter and Sub-Officer ranks took place between March and June 1991. The numbers of candidates from Scottish brigades sitting and the numbers passing these examinations over the past 4 years are shown in the table below.

Written examinations	1988			1989			1990			1991		
	No. of candidates	No. of Passes	%	No. of candidates	No. of Passes	%	No. of candidates	No. of Passes	%	No. of candidates	No. of Passes	%
Leading Firefighter	293	117	39.9	327	110	33.6	300	102	34.0	343	103	30.0
Sub-Officer	172	45	26.2	175	57	32.6	195	65	33.3	213	32	15.0
Station Officer	214	23	10.4	179	27	15.1	170	31	18.2	152	33	21.7
Practical examinations												
Leading Firefighter	110	81	73.6	139	74	53.2	169	103	60.9	155	94	60.6
Sub-Officer	69	38	55.1	75	39	52.0	95	49	51.5	100	50	50.0

119. Amended regulations introduced in 1991 provided that a candidate who entered but failed to take all papers in a written examination in a particular year would be ineligible to take the same examination in the following year and that a candidate who failed to obtain 25% of the overall marks obtainable in the same written examination in 2 successive years would similarly be ineligible for the next year's examination.

Institution of Fire Engineers (IFE)

120. Members of the Scottish Branch of the IFE attended a variety of meetings during the year where the subject presentation ranged from forensic science, the role of the RAF in peacetime, to the Royal Navy approach to mine disposal. Six meetings were held at venues throughout the country and attendances varied from 40 to 50 members with occasional guests. The Branch Committee are to be commended on the diverse and interesting programme arranged for the various meetings. However, it is disappointing to note that with a recorded Branch membership of 452 only about 10% of the membership are attending the meetings.

121. Tayside Fire Brigade played host to the visit of the President of the Institution, Chief

Fire Officer John Pearson, who addressed the Branch and presented Certificates to members who were successful in the Institution's examinations.

122. A total of 15 members of the Scottish Branch were successful in the 1991 examinations and 2 candidates were awarded a distinction.

123. The Branch Chairman for many years, Mr J Y Sinclair, was awarded Honorary Fellowship by the Council of the Institution following nomination from the Scottish Branch. The Council member representing Scotland is Firemaster Morrison of Grampian Fire Brigade.

124. The Scottish Branch is already preparing the groundwork for the 75th Anniversary of the Institution, which has its registered offices in Edinburgh. The Annual General Meeting in the year 1993 is scheduled to be held at the Scottish Exhibition and Conference Centre in Glasgow.

SECTION G - MISCELLANEOUS

Scottish Central Fire Brigades Advisory Council

125. The Council meeting held on 6 June was chaired by Mr G A Hart, Secretary, The Scottish Office Home and Health Department, and that on 6 December by Mr D J Essery, Under Secretary in the Department.

126. The Council considered reports from the Joint Pensions Committee, Joint Committee on Fire Brigade Operations, Joint Fire Prevention Committee plus a report on Scottish fire prevention publicity activities, Joint Committee on Fire Brigade Communications, Joint Committee on Appliances Equipment and Uniform, Joint Training Committee, Joint Committee on Special Appliances, Joint Committee on Fire Research and a report by CACFOA (Scotland) on the effects of the provisions of the Control of Substances Hazardous to Health Regulations on volunteer firefighters.

127. The Council normally meets twice a year in June and December and takes half of the Joint Committee Reports at each meeting. This allows an opportunity for full discussion on the items which are summarised in the reports and for explanations by a member of each committee on the work carried out during the year.

128. 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 1991.

129. The Fire Service Inspectorate is represented on the various committees which report to the SCFBAC and the following information gives an indication of the work carried out by these committees.

Joint Committee on Fire Brigade Operations

130. This Committee oversees several technical sub-groups and working parties dealing with operational matters affecting the fire service in general.

131. Current projects nearing completion include a Working Party set up to revise advice to the fire service on Incidents Involving Radioactivity; a Working Group on Fire-fighting in Tunnels and Similar Structures; and advice to the service on incidents involving acetylene. When these matters have been finalised guidance will be issued to the fire service in the form of Technical Bulletins.

132. Other matters within the remit of this Committee are the Technical Group dealing with Breathing Apparatus, the Study Group on the Protection of Firefighters from Toxic Hazards and a number of other groups examining such matters as access difficulties posed by security doors; rope rescue procedures and associated equipment; fire-fighting and rescue at sea; fire brigade procedures following terrorist incidents; guidance on procedures to be adopted at incidents involving asbestos; and incidents in prison service establishments. Guidance is issued to brigades in the form of a Technical Bulletin, a 'Dear Firemaster' Letter or a Scottish Office Home and Health Department Circular.

Joint Training Committee

133. This Committee monitors the work of several working parties and sub-groups. Current projects in hand are a review of the Fire Service Drill Book, work on first aid and casualty handling and an extension of the training requirements for control room staff.

134. The Drill Book review, which is a 5-yearly exercise to update advice and techniques applicable to training, should be completed in 1992. The drill book, which will be issued in a new form, will incorporate a revision of standard drills and a revised section on fitness

training for firefighters.

135. Members of the Drill Book Working Party are also considering the first aid and casualty handling needs of the service and it is expected that their recommendations will be put to the Committee for approval in mid-1992. The recommendations will relate to levels of competence in first aid for wholetime, retained and volunteer personnel and the first aid qualifications gained on the successful completion of the specified courses are designed to satisfy the requirements of the Health and Safety Commission's Approved Code of Practice.

136. The training requirements for control room staff will contain an element relating to the stress factor involved when control operators receive emergency calls from members of the public and/or simultaneous reports of large incidents and major emergencies.

137. Other areas of involvement of the Committee are the Sudbury Report on Command, Leadership and Management Training at the Fire Service College; a sub-committee set up to examine standards of competence in the fire service; a framework document setting out the Fire Service College's policy objectives when the College is granted Agency Status in 1992; and an ongoing contact with the Fire Services Examinations Board.

Joint Committee on Appliances, Equipment and Uniform

138. This Committee deals with specifications for each of the above items and, because of the technical nature of many of the submissions, is supported by a Technical Sub-Committee chaired by the Senior Engineering Inspector of the Home Office Fire Inspectorate. Advice is issued to the service in the form of 'Dear Firemaster' Letters or Scottish Office Home and Health Department Circulars with accompanying specifications where appropriate.

139. Current matters under review are fire-fighting uniform; fire boots; and the European (CEN) Standards for firefighters' protective clothing. While the main Committee normally meets twice yearly, the Technical Sub-Group and the Engineering Inspectorate maintain continuous dealings on a variety of on-going projects.

Joint Committee on Communications

140. Two research projects, namely a Major Review of Radio Communications and a study into Replacement Mobilising and Communications Systems, were allocated to outside consultants. The results of these research projects should be available in the early part of 1992.

141. Although both projects were concerned with the fire service in England and Wales, the major review of radio communications is being duplicated in Scotland where a questionnaire, similar to that produced for the Home Office, is to be issued to brigades and to the other emergency services in Scotland. From information obtained from the questionnaire it should be possible to estimate the emergency services' needs in the communications field in future years. This should enable advice to be given on the best and most cost effective way to proceed in the future.

142. Other areas covered by the Committee include discussions with British Telecom and Mercury Communications Ltd on an approved Code of Practice relevant to both companies. The Code of Practice will seek to set out the best current practices for dealing with emergency calls and will include advice on procedures and methods of monitoring, tracing and recording such calls.

143. The Directorate of Telecommunications of The Scottish Office is represented on the Committee to provide advice on matters of a technical nature relating to Scotland.

Joint Committee on Fire Research

144. The Committee considered various fire related projects for inclusion in the 1991/92 strategic plan, which comprises a programme of research work to be carried out by the Fire Research and Development Group, with projects programmed until 1996. The plan is divided into 4 main groups: fire prevention and protection; fire-fighting equipment; fire service support; and other support. Following a Home Office reorganisation, staff from the Scientific Research and Development Branch have amalgamated with the Fire Research and Development Group and are now part of the Fire and Emergency Planning Department at the Home Office.

145. At present there are 31 fire related studies being undertaken within the strategic plan. Brief details about a number of the projects are given in the following paragraphs.

146. One project relates to the toxicity of combustion products of polytetrafluorethylene (PTFE) as proposed for roofs in town centres and other developments. The high thermal stability of PTFE has been known for some years but uncertainty existed about the toxicity of the products of thermal decomposition. Previous research suggested that it may emit products 1000 times more toxic than any other known toxic species, which would put the product in the supertoxic category. In view of the increasing use of PTFE sheeting as a roof covering for shopping malls, sports stadia and similar complexes, a need was identified for research to establish what the potential hazards were from the decomposition of PTFE in a fire situation. The object of the study is to confirm the presence of a supertoxic species during the thermal degrading of PTFE in standard laboratory test equipment, and on a large scale. The project commenced in November 1986 and is to continue through 1991 to enable an interim code of practice for the use of PTFE based materials to be prepared. Large scale experiments may then be undertaken to determine if the supertoxic species is produced under more realistic fire conditions and is not merely a function of the small and intermediate scale test equipment. Progress has been made on the preparation of an interim code of practice for the use of PTFE in buildings.

147. Concern has been expressed about the rapid growth of fires caused by materials used in modern upholstered furniture. Though tests are now available for ignitability of such furniture, a need was identified for a test of the rate of fire growth once ignition had occurred. The study, which considers single items of furniture only, is being undertaken by the Fire Research Station, the main stages being the comparison of large and small scale test methods and the study of calorimeters. A report on the Core Calorimeter study will be made available in the near future.

148. Because there is a lack of information on the likelihood of domestic smoke alarms not being kept in good working order after they have been installed, and equally a lack of information about their effectiveness in saving life, a project was set up to obtain information as to the efficiency of these alarms. Five thousand Black and Decker and 5,000 BRK smoke alarms were purchased and fitted into dwellings and after 18 months the alarms were checked to determine how many were still in good working order. A second visit to check the maintenance of alarms will commence in April 1992.

149. The number of injuries as a result of domestic fires has steadily increased over the last few years in the UK. 10,178 non-fatal domestic fire injuries were reported in 1988 - a rise of 76% over the previous 10 years. Recent research has shown that 90% of domestic fires do not result in a fire brigade call-out, and injuries in those incidents would not be recorded in fire statistics. The main causes of such fires, mostly cooking accidents and smoking materials, are known but there is little information on how the resulting injuries occur. The object of the project is to investigate the characteristics of a sample of at least 50 fire injury victims, with regard to their environment and the circumstances surrounding the fire. It is intended to recommend ways in which the incidence of fires, and their associated injuries might be reduced by improving publicity material and advice.

150. New specifications for a fire-fighting tunic issued to the fire service in 1988 have resulted in concern being expressed regarding the additional thermal load imposed on the firefighter when wearing the tunic in conjunction with matching overtrousers. The objects of this study are to investigate both the protection afforded by any additional load

imposed on the firefighter when wearing the new tunic and overtrousers in hot environments and the practicality of adopting other forms of outer garments. This would include one-piece suits affording the same or improved standards of protection as the present tunics. The work which started in October 1991 is being undertaken by the Fire Research and Development Group in close liaison with the Institute of Occupational Medicine in Edinburgh and will take about 3 years to complete.

151. A study is being undertaken to ascertain what ladders are carried on fire appliances and their suitability to satisfy requirements on the fireground and elsewhere. Since ladder requirements influence the length and size of fire appliances, a review of ladders will provide helpful information on the broader issue of a fundamental reappraisal of appliance design. The main objectives of the study are to establish a pattern of usage of fire service ladders over a range of building risks in a cross section of brigade areas; assess the suitability of existing ladders in relation to current brigade usage; assess the suitability of existing ladders for changing brigade circumstances, particularly the possibility of a more extensive use of smaller appliances; and to evaluate the possibilities and cost of improved ladders being constructed to meet current and foreseeable changing circumstances. The project commenced in April 1991 and preliminary literature survey work and questionnaire design work has been carried out. An interim report is to be published in 1993.

152. The fire service, as part of its normal work, regularly attends incidents involving hazardous chemicals. Therefore, brigades carry special protective clothing for the protection of firefighters and have established procedures for the removal of chemicals from the protective clothing after completion of the incident. A need was established for a review of the present equipment and decontamination practices; the range of protective clothing available to the fire service; its limitations; and the effectiveness of the various decontamination procedures. Consultants will be asked to advise on the range of chemicals likely to be met and the efficiency of the protective clothing when in contact with these chemicals.

Civil Defence and Emergency Planning

153. For emergency war planning purposes, Scotland is divided geographically into 2 Zones, each being co-ordinated by the Zone Fire Commander (Designate), who is of Firemaster rank, and his Regional Staff Officer. Each brigade has a Brigade Emergency Planning Staff Officer (BEP SO) who is responsible to their respective Firemasters for the preparation and updating of Brigade Emergency War Plans.

154. All Scottish brigades have developed their plans to an advanced stage and are in the process of updating the content as circumstances dictate. As these plans are formulated, the overlap between the wartime needs and peacetime planning assumptions of the fire service become increasingly evident.

155. During 1991 the fire service staged 2 emergency war planning exercises at the Emergency Planning College, Easingwold. Scottish brigades were fully represented at these exercises which were designed to test and evaluate the fire service response to wartime situations. The Directing staff were the Regional Staff Officers and members of the Fire Inspectorate.

156. Following the retirement in January 1991 of Firemaster Halliday, Zone Fire Commander (Designate) South Zone, Mr Jameson, Firemaster of Strathclyde Fire Brigade was appointed to this post.

FINDS

157. The Fire Information National Data Service is a computer network linking all United Kingdom Fire Brigades, the Fire Service College and the Fire Inspectorate. The system, administered by CACFOA Research Ltd, was set up in 1988 with the main frame computer based at Bradford University. During 1991 the system was upgraded and the

main frame computer relocated at the Chief and Assistant Chief Fire Officers' Association Headquarters at Tamworth.

158. FINDS has been designed specifically to meet the unique requirements of the fire service. The electronic mail facility allows the free flow of information between brigades and the data base which contains lists of emergency equipment and its availability. This is of major importance to brigades in the event of a major disaster management situation arising.

159. It is envisaged that the new system, which should be fully operational by mid-1992, will facilitate greater use of the network for inter-brigade enquiries and the collation of statistical information.

Fire Services National Benevolent Fund

160. National income to the fund was £2,954,000, a decrease of 8.8% from the previous year's total, and national expenditure was £2,083,000. In Scotland income totalled £172,384, a decrease of 12.4% from the previous year, and expenditure was £38,391.

161. A sub-committee of the National Council was formed and commissioned to examine the future needs of the Benevolent Fund in order to determine the direction in which it should develop. The sub-committee conferred with every group in the UK and collated a broad consensus of views and opinions. These findings proved valuable and will be the basis of discussion at an Extraordinary General Meeting to be held early in 1992.

162. Although no major building projects were undertaken at any of the Benevolent Fund homes in 1991, the normal programme of maintenance work and the renewal of furniture continued.

163. A certificate of appreciation was awarded to Messrs Hynd Brothers, Dundee and Mr John Dickson of Tayside Fire Brigade was invited, with his wife, to attend a Garden Party at Buckingham Palace in the presence of HM The Queen in recognition of their respective service and commitment to the Fund.

Fire Services Sports and Athletics Association

164. One of the highlights of 1991 was the 21st Anniversary dinner which was hosted by Highland and Islands Fire Brigade and held at Brigade Headquarters, Inverness. The Scottish District Committee welcomed several founder members to the occasion and the guest speaker was Chief Fire Officer H C Wright CBE, the then Chairman of the National Association. I compliment the Brigade on the excellence of their hospitality on this occasion.

165. The annual Scotland v. England football match was hosted by Tayside in October, with the game ending in a draw, while Central arranged the British Inter-Brigade Golf Championships at the Shawpark Golf Club, Alloa.

166. A team representing Scottish brigades was successful in winning this year's volleyball Home Internationals tournament in Huddersfield, while several members of Scottish brigades have been selected to represent various British sides in European sporting fixtures.

167. The Athletics section of the Association in Scotland has a good liaison with the Scottish Fire Service Training School at Gullane, where running events are arranged during recruit training courses to enable potential participants in this sport to demonstrate their capabilities.

168. Travel costs for District and National events continue to rise and it is a tribute to the relevant section secretaries that sufficient funds are made available to enable full participation at a wide variety of venues. The enthusiasts normally make personal financial sacrifices in pursuit of their respective sports and they are to be complimented

for their efforts in ensuring that sports and athletics in the Scottish Fire Service continues to flourish.

Competitions

169. Each year the Chief and Assistant Chief Fire Officers' Association organises national competitions where teams from fire stations throughout the United Kingdom compete in the various finals. These competitions are designed to test participants' knowledge and skills in the field of both fire technology and first aid.

170. As a result of district finals, which are open to wholetime, retained and control personnel, the following teams represented Scotland in the National First Aid Competition at the Fire Service College, Moreton-in-Marsh, on 21 June 1991.

Men's Competition - Strathclyde - Strn.O Davidson
Ff Ruth

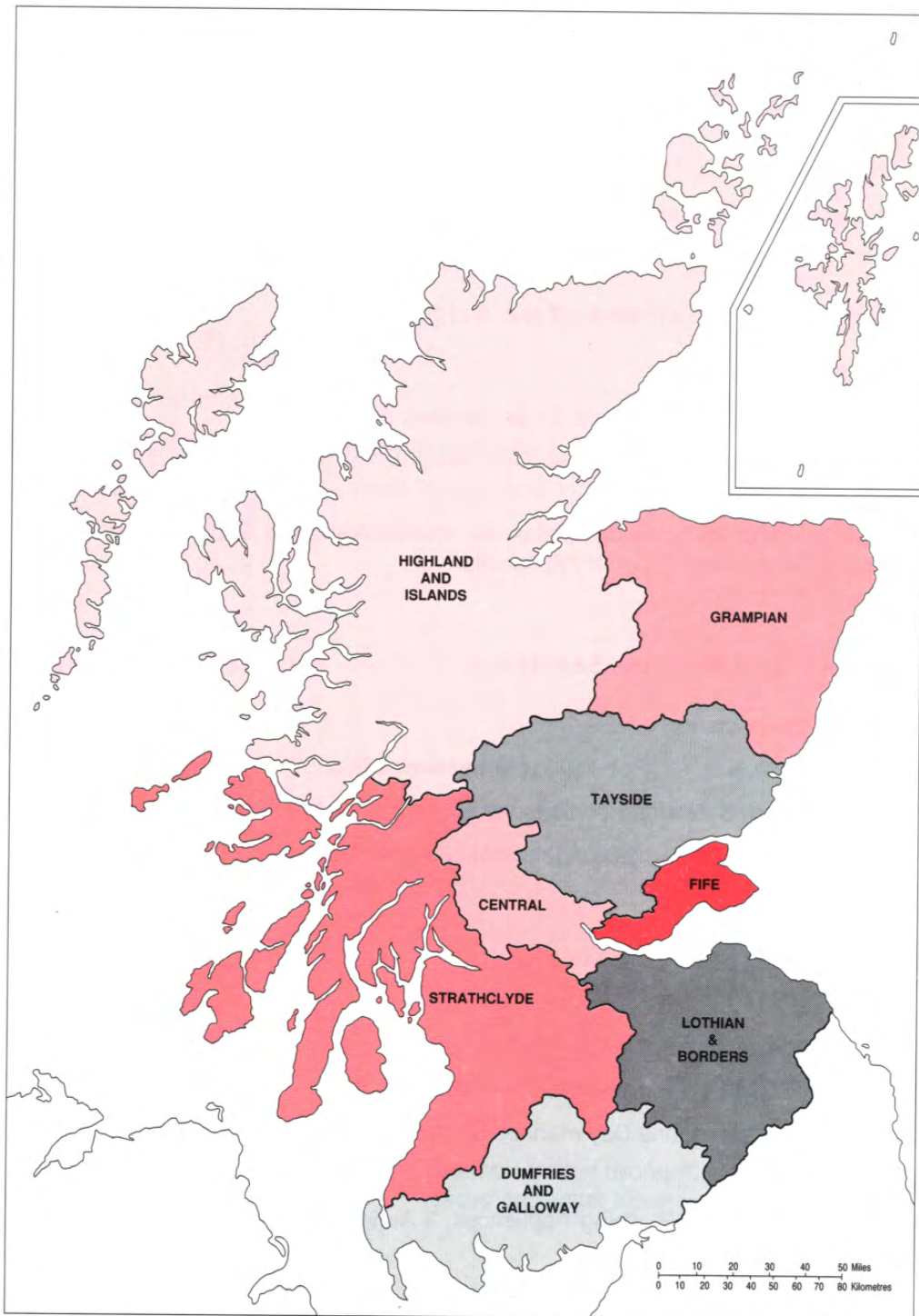
Women's Competition - Strathclyde - Ff Grimes
FCO Chalmers

Open Competition - Strathclyde - Ff Milure
SubO Spalding.

171. In the Men's Competition the Scottish team came second out of a field of 8 teams with Ff Ruth receiving the best individual of the competition award for the UK. The Scottish teams in both the Women's and Open Competitions came second in their respective competitions. This is the eleventh year in succession that Strathclyde have represented Scotland in this event.

172. The Fire Service Technical Quiz, which is funded by the Fire Service Research and Training Trust, has been held annually over the past 30 years. In addition to engendering team spirit, it is seen as a valuable method of encouraging the study of fire technology in relation to the work of operational firefighters. The quiz is open to wholetime members in alternate years with a similar competition for retained personnel in the intervening years.

173. The Scottish finals were hosted by Lothian and Borders Fire Brigade on 7 February 1991. There were 7 teams each representing different brigades. The winners on this occasion were the retained team from Cullen, representing Grampian Fire Brigade, who were eventually eliminated in the national finals at the Fire Service College.



Central Fire Brigade

Area: 263,609 hectares

Population: 271,400 Population per hectare: 1.0

4 Wholetime Stations, 11 Retained Stations and 3 Volunteer Units.

Operational Fleet: 27 Pumping Appliances, 1 Aerial Appliance and 8 Special Appliances.

Dumfries and Galloway Fire Brigade

Area: 637,006 hectares

Population: 147,600 Population per hectare: 0.2

1 Wholetime Station with Retained Complement, 15 Retained Stations, 2 Volunteer Units.

Operational Fleet: 25 Pumping Appliances, 1 Aerial Appliance, 2 Emergency Tenders, 1 Rescue Tender and 7 Special Appliances.

Fife Fire and Rescue Service

Area: 130,006 hectares

Population: 344,800 Population per hectare: 2.7

6 Wholetime and 8 Retained Stations.

Operational Fleet: 28 Pumping Appliances, 2 Aerial Appliances, 1 Emergency Tender and 4 Special Appliances.

Grampian Fire Brigade

Area: 870,000 hectares

Population: 503,000 Population per hectare: 0.6

3 Wholetime Stations, one Day-manned Station, 34 Retained Stations and 2 Volunteer Units.

Operational Fleet: 65 Pumping Appliances, 3 Aerial Appliances, 3 Rescue Tenders, 10 Special Appliances.

Highland and Islands Fire Brigade

Area: 3,069,200 hectares

Population: 274,100 Population per hectare: 0.1

1 Wholetime Station, 26 Retained Stations and 99 Volunteer Units.

Operational Fleet: 77 Pumping Appliances, 1 Aerial Appliance, 1 Emergency Tender and 3 Special appliances.

Lothian and Borders Fire Brigade

Area: 642,531 hectares

Population: 845,600 Population per hectare: 1.3

12 Wholetime and 22 Retained Stations.

Operational Fleet: 58 Pumping Appliances, 6 Aerial Appliances, 3 Rescue Tenders and 3 Special Appliances.

Strathclyde Fire Brigade

Area: 1,386,127 hectares

Population: 2,311,200 Population per hectare: 1.7

38 Wholetime Stations, 44 Retained Stations and 31 Volunteer Units.

Operational Fleet: 162 Pumping Appliances, 17 Aerial Appliances, 8 Rescue Tenders and 9 Special Appliances.

Tayside Fire Brigade

Area: 750,104 hectares

Population: 392,500 Population per hectare: 0.5

6 Wholetime Stations, 15 Retained Stations and 4 Volunteer Units.

Operational Fleet: 44 Pumping Appliances, 4 Aerial Appliances, 8 Rescue/Emergency Tenders and 5 Special Appliances.

Footnote:

Pumping Appliance -	General fire-fighting appliance with water carrying and pumping facilities
Aerial Appliance -	Turntable ladder hydraulic platform used for rescue and water tower purposes.
Rescue Tender/Emergency Tender -	Appliances carrying specialist equipment for support at fires, major incidents and special services.
Special Appliances -	Include foam tenders, salvage tenders, demountable pod systems, command and control units and other specialist appliances.

Establishment and Strength of Fire Brigades as at 31 December 1991

	Central		Dumfries & Galloway		Fife		Grampian		Highland & Islands		Lothian & Borders		Strathclyde		Tayside		Scottish Total		
	Actual Strength		Actual Strength		Actual Strength		Actual Strength		Actual Strength		Actual Strength		Actual Strength		Actual Strength		Actual Strength		
	Establishment	Male	Female	Establishment	Male	Female	Establishment	Male	Female	Establishment	Male	Female	Establishment	Male	Female	Establishment	Male	Female	
Firemasters	1	1	-	1	1	-	1	1	-	1	1	-	1	1	-	1	1	-	8
Assistant Firemasters	1	1	-	1	1	-	2	2	-	1	1	-	5	5	-	1	1	-	14
Senior Div. Officers	-	-	-	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-	12
Div. Officers I	1	1	-	1	1	-	2	2	-	1	1	-	4	4	-	5	5	-	15
Div. Officers II	4	4	-	2	2	-	3	4	-	4	4	-	14	13	-	1	-	-	47
Div. Officers III	-	-	-	2	2	-	6	4	-	3	3	-	19	19	-	8	8	-	40
Asst. Div. Officers	9	9	-	8	7	-	12	16	-	10	11	-	20	18	-	14	12	-	116
Station Officers	17	16	-	9	9	-	37	39	-	34	33	-	53	43	-	37	36	-	366
Sub-Officers	27	29	-	8	8	-	29	27	-	7	7	-	72	67	-	36	37	-	441
Leading Firefighter	32	31	-	12	12	-	64	61	-	14	14	-	100	95	-	44	45	-	600
Firefighter	148	147	1	52	52	-	231	228	1	48	47	-	481	455	2	263	250	1	2,869
Totals	240	239	1	96	95	-	382	374	1	98	97	-	749	700	2	410	395	1	4,528
Control Room Staff																			
PFC Officers	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	3
GFC Officers	-	-	-	-	-	-	-	-	-	-	-	-	5	5	1	4	1	-	15
FC Officers	-	-	-	1	1	-	1	1	-	1	1	-	5	5	1	4	1	-	15
SFC Operators	4	1	3	-	-	-	4	4	-	4	1	3	4	8	3	5	4	1	33
LFC Operators	4	1	3	-	-	-	4	4	-	4	4	-	4	8	-	7	4	1	36
FC Operators	8	2	6	9	-	9	12	5	7	8	3	13	16	3	13	4	4	3	115
Totals	17	5	12	15	-	15	21	5	16	17	1	17	30	4	26	67	8	57	203
Part-time Retained																			
Station Officers	3	-	-	-	-	-	2	2	-	13	13	-	5	4	-	8	8	-	49
Sub-Officers	14	12	-	16	16	-	8	8	-	28	28	-	25	26	-	53	50	-	198
Leading Firefighter	17	16	-	20	20	-	10	9	-	56	56	-	32	29	-	63	65	1	31
Firefighter	136	120	1	157	156	1	92	76	-	297	276	-	233	214	-	495	457	7	237
Totals	170	148	1	193	192	1	112	95	-	394	373	-	295	273	-	619	580	8	294
Part-time Volunteer																			
Asst. Div. Officers	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	5
Station Officers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Officers	-	-	-	-	-	-	-	-	-	98	97	1	-	-	-	-	-	-	102
Leading Firefighter	-	-	-	2	2	-	-	-	-	83	83	-	-	-	-	26	31	-	3
Firefighter	24	11	-	18	14	1	-	-	-	996	751	16	-	-	-	239	205	4	32
Totals	24	11	-	20	16	1	-	-	-	1,182	939	17	-	-	-	285	236	4	36
Wholtime	240	239	1	96	95	-	382	374	1	98	97	-	749	700	2	410	395	1	4,528
Control Room	17	5	12	15	-	15	21	5	16	17	1	17	30	4	26	67	8	57	18
Part-time Retained	170	148	1	193	192	1	112	95	-	394	373	-	295	273	-	619	580	8	294
Part-time Volunteer	24	11	-	20	16	1	-	-	-	1,182	939	17	-	-	-	285	236	4	36
GRAND TOTALS	451	403	14	324	303	17	515	474	17	1,691	1,410	34	1,074	977	26	3,180	3,022	71	758

Changes in Wholetime Strength during 1991

GAINS	Operational Personnel												Control Room Personnel																	
	Central			Duffres & Galloway			Fife			Grampian			Highland & Islands			Lothian & Borders			Strathclyde			Tayside			TOTALS					
	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS	M	F	TOTALS			
(i) By recruitment	8	1	3	19	3	26	82	2	84	0	2	2	0	2	2	0	2	2	0	2	2	0	2	2	0	2	2	160	1	161
(ii) By transfer from other brigades				2	4	6	3	2	5	2	2	4	2	2	4	2	2	4	2	2	4	2	2	4	2	2	4	15		15
Total Gains	8	1	3	21	7	28	84	4	88	2	4	6	2	4	6	2	4	6	2	4	6	2	4	6	2	4	6	175	1	176
LOSSES																														
(i) By death:-																														
Attributable to service																														
Not attributable to service	1						2																					3		
(ii) By Discharge	1						3																					4		
(iii) By Resignation:-																														
During 1st or 2nd year of service																														
After 2nd but under 10 years service				2	1	3	1	1	2	6	1	7	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	7		
After 10 years service	1	2	3	2	2	4	5	5	10	5	5	10	5	5	10	5	5	10	5	5	10	5	5	10	5	5	10	10		
(iv) By Retirement On Pension				1	3	4	2	19	21	2	19	21	4	29	33	4	29	33	4	29	33	4	29	33	4	29	33	29		
As a result of Over 40 medical grounds	1						5	10	15	5	10	15	16	16	32	16	16	32	16	16	32	16	16	32	16	16	32	32		
Medical other than over 40	4			17	2	19	62	2	64	8	2	10	2	2	4	2	2	4	2	2	4	2	2	4	2	2	4	98		
(v) On transfer to other brigades	1	1	2	1	1	2	6	1	7	1	1	2	2	2	4	2	2	4	2	2	4	2	2	4	2	2	4	13		
Total Losses	8	2	10	23	10	33	114	16	130	3	16	19	8	16	24	8	16	24	8	16	24	8	16	24	8	16	24	184	1	185

Summary of Fires and Special Services which have Occurred in 1991

	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 Faulty	Malicious		
Central	815	704	94	13	4			408	878	820	593	595	239	4,348
Dumfries & Galloway	502	444	44	13	1			590	246	420	112	283	261	2,414
Fife	1,196	1,154	33	9				624	1,332	996	627	997	341	6,113
Grampian	1,515	1,325	110	76	4			1,260	1,180	1,359	538	613	632	7,097
Lothian & Borders	4,097	2,729	603	755	10			888	3,681	4,065	1,442	3,206	1,092	18,471
Highland & Islands	777	672	101	4				1,992	797	789	196	395	400	5,346
Strathclyde	11,147	9,905	1,032	191	17	2		2,3131	6,780	9,389	5,311	1,370	3,831	60,141
Tayside	1,805	1,649	148	8				604	2,469	1,294	512	1,022	560	8,266
Total	21,854	18,852	2,165	1,069	36	2		8,679	27,363	18,132	9,331	18,481	7,356	112,196

MAJOR FIRES 1991

REQUIRING AN ATTENDANCE OF 6 OR MORE PUMPING APPLIANCES

Date	Address	Type	Brigade
January			
3	Davids Crescent, Kilwinning	School	Strathclyde
8	Harbour Road, Troon	Restaurant	Strathclyde
9	Hecla Avenue, Glasgow	Supermarket	Strathclyde
13	Hunter Square, Edinburgh	Warehouse	Lothian and Borders
15	Easter Road, Edinburgh	Church	Lothian and Borders
19	Middlefield Industrial Estate, Falkirk	Warehouse	Central
26	Bristo Square, Edinburgh	Students' Union	Lothian and Borders
31	Mar Lodge, Braemar	Historical Building	Grampian
February			
23	York Place, Edinburgh	Dwelling	Lothian and Borders
26	Niddrie Mains Road, Edinburgh	Sports Complex	Lothian and Borders
March			
23	Maple Road, Glasgow	School	Strathclyde
April			
6	St Stephens Street, Edinburgh	Dancehall	Lothian and Borders
27	Queen Elizabeth Avenue, Glasgow	Football Pools Collecting Office	Strathclyde
May			
5	Abercromby Place, Edinburgh	Offices	Lothian and Borders
8	Drumstinchal, Dalbeattie	Forest	Dumfries and Galloway
9	Duke Street, Glasgow	Hotel	Strathclyde
12	Main Street, Thornliebank, Glasgow	Factory	Strathclyde
15	Hawkhead Road, Paisley	Chemical Factory	Strathclyde
19	Riverside Place, Ayr	High Rise Flats	Strathclyde
27	St Andrews Drive, Glasgow	Railway Depot	Strathclyde

Appendix 5

June

9	Castle Street, Edinburgh	Hotel	Lothian and Borders
20	Glasshouse Loan, Alloway	Factory	Central

July

15	Irvine Road, Largs	Nursing Home	Strathclyde
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September

3	Auchboo, Balquhider	Agricultural Buildings	Central
3	Clyde Place, Glasgow	Warehouse	Strathclyde
8	Brook Street, Glasgow	Timber Yard	Strathclyde
11	Alton Farm, Galston	Agricultural Buildings	Strathclyde
12	Maybole Road, Ayr	Retail Store	Strathclyde
23	Earl Grey Street, Edinburgh	Shop	Lothian and Borders

October

5	Fiddesbeg Farm, Near Ellon	Range of Farm Buildings	Grampian
10	Howe Gardens, Auchterless	Warehouse and Packing	Grampian
24	Stevenson Ayrshire	Explosives Factory	Strathclyde

November

11	West George Street, Glasgow	Multi-occupancy Building	Strathclyde
18	Abotts Road, Falkirk	Sawmill	Central

December

4	Mill of Brathens, Banchory	Government Research Station	Grampian
14	Loreny Ind. Estate, Kilmarnock	Warehouse	Strathclyde
29	Portland Street, Irvine	Factory	Strathclyde
31	Great Junction St, Edinburgh	Indoor Market	Lothian and Borders

Recorded Fire Fatalities 1991

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	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	
	19	10	30	25	33	22	48	51	18	1	1	2	4	10	2	2	2				17	10	13	10	16	19	8	6	8	6	9	17	139		
Central	2	1	2	4			8								1						9	2	1			4			1			1			9
Dumfries & Galloway			1	1		1	3				1				1						3	1	1			1									3
Fife	1		1		2	3	7	5	1					1							7	1	1			1			2				1		7
Grampian	2		3	3	2	1	11	8	1		1										11	1	1			2	1	1	1	1	1	1	2	11	
Highland & Islands	1		5	1	5		12	8	2				1		1						12	1	3			1	1	1				2		12	
Lothian & Borders	3			2	5	8	18	1	12	5											18	3	1	3	2	3		1	1	1		3		18	
Strathclyde	9	9	12	14	19	9	72	15	34	13		1	1	2	4	2				72	8	2	10	7	5	12	5	4	2	2	7	8	72		
Tayside	1		6				7	2	1					4						7				1	5						1		7		
Totals	19	10	30	25	33	22	48	51	18	1	1	2	4	10	2	2	2			139	17	10	13	10	16	19	8	6	8	6	9	17	139		

HM Chief Inspector of Fire Services for Scotland Annual Report

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CORRECTIONS

Page 40 Appendix 4

Strathclyde	Chimney Fires	<i>Delete 23131</i>	<i>Insert 2313</i>
	Secondary Fires	<i>Delete 6780</i>	<i>Insert 16,780</i>
	Malicious False Alarms	<i>Delete 1,370</i>	<i>Insert 11,370</i>
	(a) 1 pump	<i>Delete 18,852</i>	<i>Insert 18,582</i>

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