



THE SCOTTISH OFFICE

Home and Health Department

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

**Report for 1992**





THE SCOTTISH OFFICE HOME AND HEALTH DEPARTMENT

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

Report for 1992

Presented to Parliament by the Secretary of State for Scotland  
by Command of Her Majesty  
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Report 1992

of A Winton Esq CBE 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 1992.

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 the operational, technical and administrative work of fire brigades in Scotland for the calendar year 1992.
2. During the year the total number of emergency calls attended by the Scottish Fire Service was 113,102 - an increase of 0.8% over the previous year's figure of 112,196. This increase is small compared with increases in other recent years.
3. The total number of fire incidents attended by brigades in 1992 was 52,790 - 8.8% lower than the 1991 figure of 57,896. In contrast, false alarm calls increased in 1992 to 52,750 - 12.4% above the 1991 figure of 46,944. This is the highest level recorded. False alarm calls accounted for almost half (46.6%) of the total number of emergency calls received. Of particular concern is the alarming increase in the number of malicious calls to brigades, which rose by 21.7% from 18,481 in 1991 to 22,485 in 1992. The cost of these hoax calls is substantial, both in financial terms and also in the unnecessary use of brigade manpower and equipment. However, in Central and in Lothian and Borders areas malicious calls have decreased for the second successive year. Lothian and Borders in particular experienced a 13.9% fall in 1991 and a further reduction of 34.3% in 1992, from 3,206 calls in 1991 to 2,107 calls in 1992.
4. Fire safety inspections by brigades fell during the year by 1.9% from 78,906 in 1991 to 77,419 in 1992, although increases in the promotion of fire prevention themes and publicity at local community level were achieved by a number of brigades.
5. As well as the welcome reductions in the number of fire incidents during the year, the total number of fire deaths at incidents attended by Scottish fire brigades was 119, 14.4% below the 1991 total of 139. This is especially gratifying, although the number of deaths is still unacceptably high.
6. During 1992 99 persons died in fires in domestic premises compared to 122 in 1991, a decrease of 18.9%. In 1992, domestic fire deaths accounted for 83.2% of the total fire fatalities figure compared with 87.8% in 1991.
7. Fire brigade officers investigating the circumstances of fire death incidents in dwellings in 1992 have estimated that a high proportion of the total number of fatalities could have been saved if smoke alarms had been installed and properly maintained in the houses where the fires occurred. Although it is estimated that around 60% of Scottish dwellings are now fitted with these devices, it is essential to maintain the campaign encouraging not only the installation of smoke alarms, but also their maintenance. The inexpensive nature of these alarms does not reflect the value obtained in the protection of life during an outbreak of fire.
8. A full programme of inspections of the 8 Scottish fire brigades and the Scottish Fire Service Training School was carried out during the year. These formal inspections were supplemented by visits to brigades and to the School by members of the Inspectorate to advise on specific and technical matters.
9. Last year I announced that it was my intention to make available to the public my inspection reports on each brigade and on the School; I can now confirm that these reports will be published as from 1993.
10. In my report for 1991, I indicated that the Home Office were developing output measures and performance indicators to assess the effectiveness and efficiency of the fire service in England and Wales and that The Scottish Office Home and Health Department were monitoring this activity to consider the relevance for the fire service in Scotland. The Department is now considering, with the aid of Scottish fire brigades, arrangements for introducing a set of performance indicators for Scotland and it is hoped that some of them will be piloted during the course of 1993-94.



11. I have previously reported on the increase in the number of occasions when fire crews were being subjected to harassment and attack while attending operational incidents. Despite the work which has been done by all brigades to improve liaison with local communities and to explain the essential humanitarian work carried out by the fire service, in the areas where these incidents take place, there has been no improvement in this unacceptable feature. While I am sure the vast majority of the public appreciate the contribution made by the fire service towards public safety, it would appear that there are certain elements in society which have little or no regard for this work. Despite this, I am satisfied that brigades will not be deterred from continuing to fulfil their responsibilities to the community as a whole and that they will persevere with their efforts to ensure that the contribution they make to public safety is fully understood.

12. Appendix 1 provides a map of Scotland delineating the areas covered by each brigade. In addition, information is given which summarises the number of emergency incidents attended in each area, the size of the area, its population and details of the number of fire stations and volunteer units, as well as the resources of the brigade in terms of its operational fleet.

## **DEVELOPMENTS IN 1992**

### **Local Government Reform in Scotland**

13. In June 1991 the Government issued a Consultation Paper "The Structure of Local Government in Scotland: The Case for Change" as part of their wide ranging review of local government. A summary of the responses to this consultation paper was published in February 1992. A further Consultation Paper "The Structure of Local Government in Scotland: Shaping the New Councils" was issued in October 1992, which recommended a move towards a unitary system of local government for Scotland, and outlined 4 illustrative options based on a system of a 15, 24, 35 or 51 unitary authorities. The closing date for responses to this Consultation Paper is 29 January 1993.

14. On the return of fire services to local authority control in 1948 there were 11 fire brigades established to provide fire cover throughout Scotland. On the reorganisation of local government in 1975 this number was reduced to 8 brigades. The present Consultation Paper notes there is considerable disparity in the sizes of the 8 Scottish brigades, but acknowledges that I regard all 8 as being efficient, irrespective of their size, and that they are all able to cope with the wide range of operational and administrative responsibilities with which they are likely to be faced. It is also acknowledged that there is no overriding need to change the structure of the fire service in response to changes in the structure of local government.

15. On the other hand the Paper points out that a reduction in the number of fire brigades would provide greater scope for standardisation of the increasingly sophisticated equipment deployed by brigades, thereby achieving improvements in efficiency, and the potential for significant financial savings. The Consultation Paper accordingly invites views on the proposition that changes might be made in the structure of the fire service with a view to improving efficiency and functional effectiveness, perhaps involving a reduction in the current disparity in the sizes of fire brigades and a reduction in the number of brigades.

16. While these propositions are open for consultation and public debate, it is reassuring to note that, notwithstanding any changes that may take place with regard to the structure of local government, there is no suggestion of increasing the present number of fire brigades in Scotland.

### **Fire Safety**

17. It will be noted that, in line with the principle adopted by the Chief and Assistant Chief Fire Officers' Association and a number of Scottish brigades, the title of this Section of the Report has changed from that previously used. Although "fire prevention" is still

the primary objective, the term is not considered to encompass the wide range of work handled by brigades within their statutory enforcement responsibilities and when providing advice to organisations and individuals on fire related matters.

18. Over the years the complexity in building design and the materials used in building construction, as well as those used in industrial processes, have changed dramatically. These changes demand a greater knowledge of fire engineering concepts and solutions, not only in the prevention of fire, but also in the measures which are necessary to minimise the effects of such an outbreak on life and property. The term "Fire Safety" is therefore used to indicate the broader dimension of the work carried out by brigades.

## A Comparative Study of Firefighting Arrangements

19. A report from the Home Office Research and Planning Unit entitled "A Comparative Study of Firefighting Arrangements in Britain, Denmark, the Netherlands and Sweden" was published in the latter part of 1992. It describes the principal legal, organisational and operational context within which each of the 4 countries' fire services operate. It also sets out the costs of the fire service in each country and explores the main reasons for variations in costs and performance.

20. The study was the result of the Audit Commission Occasional Paper No 1 in 1986 on Value For Money in the Fire Service, which suggested that important lessons could be learned from examining the experience and approach of continental fire services.

21. The report indicates that there are considerable variations in the costs of each country's fire service, the Danish and the Dutch being the cheapest and the Swedish the most expensive.

22. The net cost of the British Fire Service in 1989 was estimated at just under £18 per capita, for the Netherlands it was £13, for Denmark £9.50 and for Sweden the cost was £32.

23. According to the report the relatively high costs in Britain are the product partly of employing large numbers of professional firefighters, and partly of the greater number of fires. This latter aspect is due mainly to higher risks caused by high levels of urbanisation, poor infrastructure and in particular the age and condition of many buildings.

24. On the other hand, the unit cost of fires and call-outs in Britain in 1989 was the lowest of the 4 countries:

	Britain	Netherlands	Sweden	Denmark
Unit Cost of Call-Outs (approx)	£1,000	£2,200	£2,800	£1,800
Unit Cost of Fires (approx)	£2,300	£5,000	£6,800	£2,600

These differences may simply reflect the economies of scale - the more fires (and call-outs) the cheaper it is to respond to each fire - but they may also reflect variability in data collection and recording procedures, or differences in the way in which incidents are defined as fires.

25. The wide ranging and comprehensive study concludes by drawing 3 lessons.
- i. Whilst the use of more volunteers in the fire service would lead to a reduction in costs, without unduly affecting effectiveness, there is little to suggest, from the experience of continental brigades, that moving from a largely professional service to one substantially more reliant on volunteers would be possible in practice. More feasible would be to try



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- to utilise the time of firefighters, whether professional or not, more efficiently and effectively.
- ii. Further consideration should be given to broadening the division of labour within the fire service, particularly between the technical and managerial aspects of fire service provision. Two-tier entry, as practised on the continent, might assist in moving the British service in this direction.
  - iii. A third conclusion also relates to the use of personnel within the fire service, but concerns the utilisation rather than the division of labour. The research suggests that cost effectiveness could be improved if firefighters became involved in a wider range of duties whilst on call. This would reduce the under-utilisation of personnel and broaden the career base of firefighting. The most effective use of personnel resources is to be found in industrial brigades where employees perform their normal duties whilst on emergency standby. The prospect of introducing industrial brigades into this country could be considered.
26. This interesting and often controversial study will no doubt challenge the minds of all of those involved in fire service work.

### **Report by the Comptroller and Auditor General on Fire Prevention in England and Wales**

27. The above mentioned report published by the National Audit Office in December 1992 presents an in-depth examination of the work on fire prevention carried out in England and Wales. It recognises the various organisations with responsibilities and interests in this field and the following were among the many items examined.

- i. The incidence and cost of fire, by reviewing the number of fires, the number of fatal and non-fatal casualties of fire as well as the locations of the fire outbreaks and their cost, both on an individual and collective basis.
  - ii. Fire prevention in the home in relation to the statistical evidence of fire outbreaks and the measures to raise public awareness of fire safety. Education programmes for children were reviewed and the effectiveness of this, and other publicity features, assessed. Progress on the installation and maintenance of smoke alarms in dwellings was also scrutinised.
  - iii. Fire prevention in premises falling within the scope of the Fire Precautions Act 1971, both certifiable premises and non-certifiable premises. The workload of initial inspections, together with the reinspection of certificated premises, was recognised as was the potential workload of premises likely to fall within the scope of forthcoming regulations covering workplaces. In this regard the report stated "The additional tasks to be faced by fire authorities will increase the importance of encouraging them and brigades to take full advantage of the existing procedures for exempting low risk premises from designation. Research may also be necessary into the benefits and risks of reducing brigade workloads further, by extending exemptions and introducing other types of self regulation".
  - iv. Fire certification in Crown premises. This section examined the backlog of certification in Crown premises in England and Wales and the staffing shortfall associated with the workload.
28. Among the findings, the report highlighted:-
- i. the fact that fire prevention has a low national profile compared with crime prevention and that in 1991-92 the amount spent on fire prevention publicity was less than one-third of the amount spent on crime prevention;

- ii. the backlog of 21,000 applications for fire certificates in England and Wales and the unsatisfactory nature of brigades' arrangements for reinspecting certificated premises;
  - iii. the shortage of qualified fire prevention officers and the difficulties in maintaining training standards;
  - iv. the move away from the designation of premises towards self-regulation, on a value for money basis; and
  - v. the backlog of certification work on Crown premises, mainly caused by staff shortages.
29. The report recommended that the Home Office should:-
- i. set more demanding targets for reducing deaths and injuries from fire in the home;
  - ii. review fire prevention publicity;
  - iii. speed up of the issue of technical guidance and advice on improving the efficiency of brigade fire prevention activities;
  - iv. set distinct targets for clearing certification backlogs, including those in Crown premises;
  - v. encourage brigades to make greater use of existing powers to exempt low risk premises from the certification procedures;
  - vi. review the scope for further exemptions from the certification procedures and monitor the consequences of extending self-regulation;
  - vii. set brigades clear objectives and priorities for fire prevention and the allocation of resources for fire prevention work; and
  - viii. bring the levels of inspection and reinspection of Crown premises into line with those achieved by fire brigades for commercial premises.
30. The recommendations are, at present, being studied by the Home Office. Although the report's findings and recommendations apply only to England and Wales the detailed assessment which has been undertaken has provided a benchmark against which activities in Scotland on fire safety at both Departmental and brigade level are being reviewed and appraised. I will report the outcome of this consideration in my report for 1993.

## **Compulsory Competitive Tendering**

31. In November Mr J Allan Stewart MP, Minister for Local Government at The Scottish Office, welcomed the Government's announcement of the outcome of its Consultation Document "Competing for Quality" published in November 1991. The announcement introduced a further extension of compulsory competitive tendering to local authorities. Mr Stewart said,

"The Citizen's Charter sets out the Government's commitment to improving the quality and accountability of local authority services through the wider application of competition, to the benefit of the local taxpayer and consumer. Following consideration of the responses to last year's consultation paper on competition we have come to the conclusion that, whilst some amendments to the original proposals are necessary, a rigorous requirement to seek greater competition is the best way of securing greater efficiency and cost savings in the provision of local authority services, whilst guaranteeing a high standard of service to local taxpayers".

For the fire service, the Government have decided that the maintenance and repair of fire service vehicles and associated equipment should meantime remain exempt from compulsory competitive tendering. The Government have proposed, however, that with the exception of those brigades whose maintenance staff also have firefighting duties, vehicle and equipment maintenance will be market tested over the next 3 years.



## Health and Safety

32. In common with other industrial and commercial concerns, fire brigades are, in general, subject to the legislation on health and safety at work. During 1992 the second impression of the document issued by the Health and Safety Executive entitled "Successful Health and Safety Management" was published. It describes the main elements of successful health and safety management, and is designed to be a source of reference and guidance to all those involved in the management of the subject. In the Introduction it indicates that the advice within the document will be used increasingly by HSE Inspectors as a basis for testing the performance of organisations against the general duties imposed on them by the Health and Safety at Work Etc Act 1974. The Management of Health and Safety at Work Regulations 1992 will come into effect on 1 January 1993. They will place responsibilities on employers and the self-employed on such matters as risk assessments, health surveillance and information for employees. The regulations will in the main give effect to the Council Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers as well as Council Directive 91/383/EEC. An approved Code of Practice will be available to give guidance on the implementation of the regulations.

## Fire Service Inspectorate

33. During the year there was a change in the establishment of the Inspectorate, brought about by the removal of a Staff Officer post. With the completion of the period of secondment of the existing postholder, it was decided to cover the vacancy by the appointment of 2 members of the administrative staff.

34. Mr D Wilson, who has held the post of HM Inspector for over 20 years, is due to retire in early January 1993. I would record my thanks to Mr Wilson for his long period of service with the Inspectorate.

35. Mr H Hunter, formerly an Assistant Firemaster with Strathclyde Fire Brigade, has been appointed to fill the vacancy and is due to take up his duties on 11 January 1993.

36. The Fire Service Inspectorate establishment is as follows:

HM Chief Inspector	- 1
HM Inspector	- 1
Senior Assistant Inspector	- 1
Assistant Inspectors	- 2

## Firemasters and Fire Authorities

37. 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 QFSM MIFireE
Grampian -	Firemaster A N Morrison QFSM FIFireE
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.

38. For the first time since 1986 there have been no changes in the principal officers of the Scottish brigades at either Firemaster or Deputy Firemaster level. I would wish to record my thanks to Firemasters and their principal officers for the way in which they

have co-operated with the members of the Inspectorate during our visits and for the valuable discussions which we have held with them throughout the year.

## Honours and Awards

39. The following received recognition in The Queen`s Honours Lists:
- Member of the Most Excellent Order of the British Empire (MBE)*  
David G Anderson, Divisional Officer, Fife Fire and Rescue Service.
  - Queen`s Fire Service Medal (QFSM)*  
John White BA MIFireE, Firemaster, Fife Fire and Rescue Service.
  - British Empire Medal (BEM)*  
John W Jolly, Retained Sub-Officer, Grampian Fire Brigade.
  - Fire Brigade Long Service and Good Conduct Medal*  
Awarded to 235 members of the Scottish Fire Service.
40. I offer my sincere congratulations to all those whose contribution to the fire service was recognised during 1992.



# SECTION B: PERSONNEL AND ADMINISTRATION

## Establishments and Strengths

41. The establishments and actual strengths of Scottish fire brigades are given at Appendix 2 of the Report.

## Wholetime Personnel (Operational)

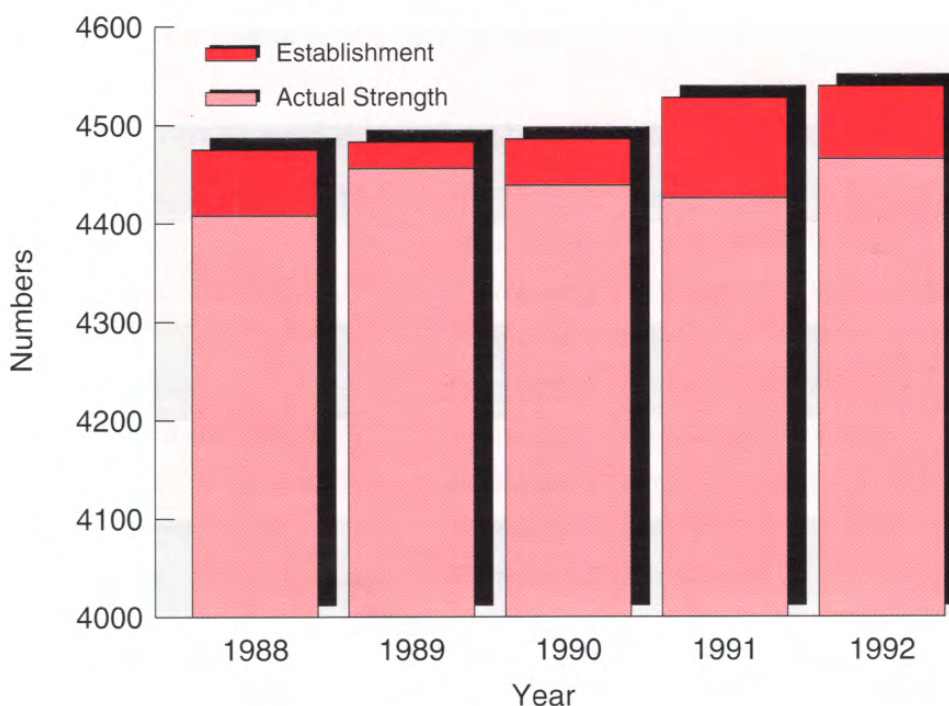
42. The total establishment of wholetime operational members of Scottish fire brigades at 31 December 1992 was 4,540, an increase of 12 over the figure for the previous year. The actual strength of Scottish brigades, as opposed to the authorised establishment, was 4,466.

43. No problems were experienced by brigades in attracting suitable personnel to fill vacancies that arose during the year but, as was the case in 1991, the number of applications from females and members of ethnic minority groups to join the fire service in Scotland was again disappointingly low, in view of the efforts made by brigades to attract such applicants. Out of a total of 5,160 applications processed by brigades in 1992, only 161 (3.1%) were from females or members of ethnic minority groups.

44. The number of female firefighters serving in brigades increased to 7 (in Strathclyde (3), Central (2), Fife (one) and Tayside (one) Fire Brigades). The number of members of ethnic minority groups serving as firefighters in brigades is recorded as being 21, the majority of whom are employed within the Strathclyde Fire Brigade.

45. Graph 1 shows the authorised wholetime establishment and actual strength of the Scottish Fire Service as at 31 December for the past 5 years.

**GRAPH 1 - WHOLETIME ESTABLISHMENT AND ACTUAL STRENGTH 1988-1992**



46. During the year 163 wholtime operational personnel left the service for a variety of reasons. This was a decrease of 8 from the previous year's figure. In contrast 202 firefighters joined the service in 1992, an increase of 41 over the 1991 level. Details of the gains and losses of personnel in each brigade are shown in Appendix 3.

47. During 1992 there were 91 retrirals from the Scottish Fire Service on medical grounds. Five of these were as a result of failing the over-40 medical, and 86 personnel retired on other medical grounds. These figures are the lowest recorded for some time, in each of the 2 categories. It is also pleasing to highlight that the number of personnel who were able to retire on ordinary pension during the year was 57, the highest number recorded for many years.

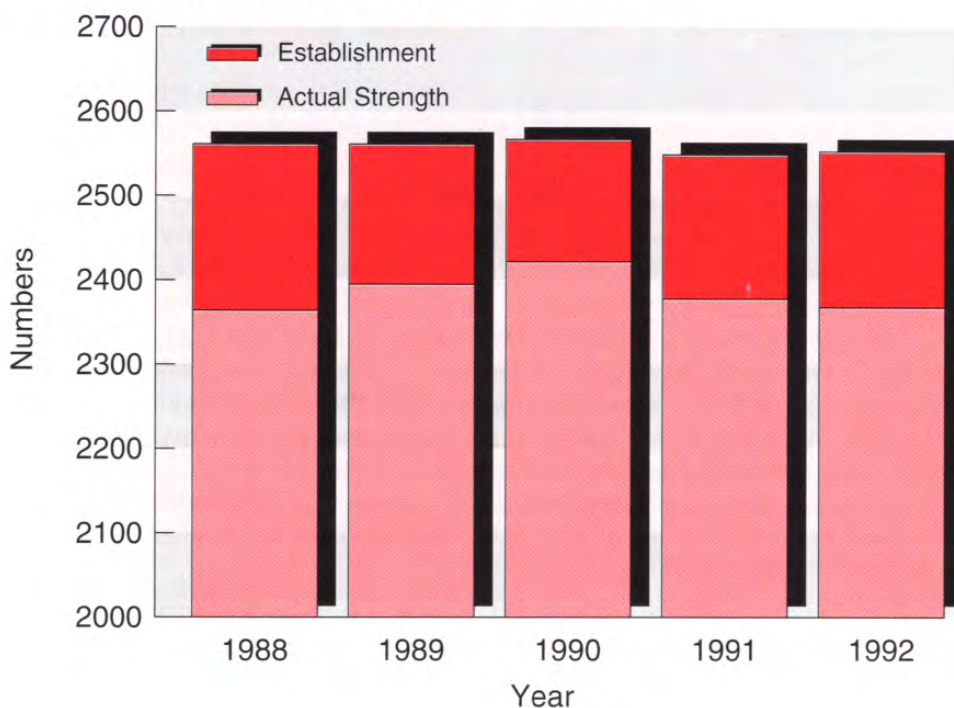
48. In general terms compulsory retirement on pension occurs when, in the case of senior officers, personnel attain the age of 60 years, or in other cases 55 years. The full pension entitlement is, however, payable after having completed 30 years' service, and reduced pensions may be paid when shorter terms are served, due to age, medical grounds or other reasons for leaving the service. As the name suggests, the over-40 medical applies to firefighters who have reached the age of 40, and is reapplied at 3 yearly intervals thereafter. With the introduction of occupational health schemes, however, some brigades have extended this form of medical to personnel under the age of 40 years. Retirement on medical grounds, other than failing the over-40 medical, applies to personnel who are considered by the Brigade Medical Officer to be unfit to continue with firefighting duties, notwithstanding their age or length of service.

49. As stated in last year's report, guidance issued to support the Fire Services (Appointments and Promotion) (Scotland) Regulations 1989 outlined steps that brigades should take to improve the general level of fitness of firefighters and to date, most brigades have introduced fitness training as part of normal watch training.

## Retained and Volunteer Personnel

50. The retained establishment and the actual strength as at 31 December for the past 5 years are shown in Graph 2.

**GRAPH 2- RETAINED ESTABLISHMENT AND ACTUAL STRENGTH 1988-1992**





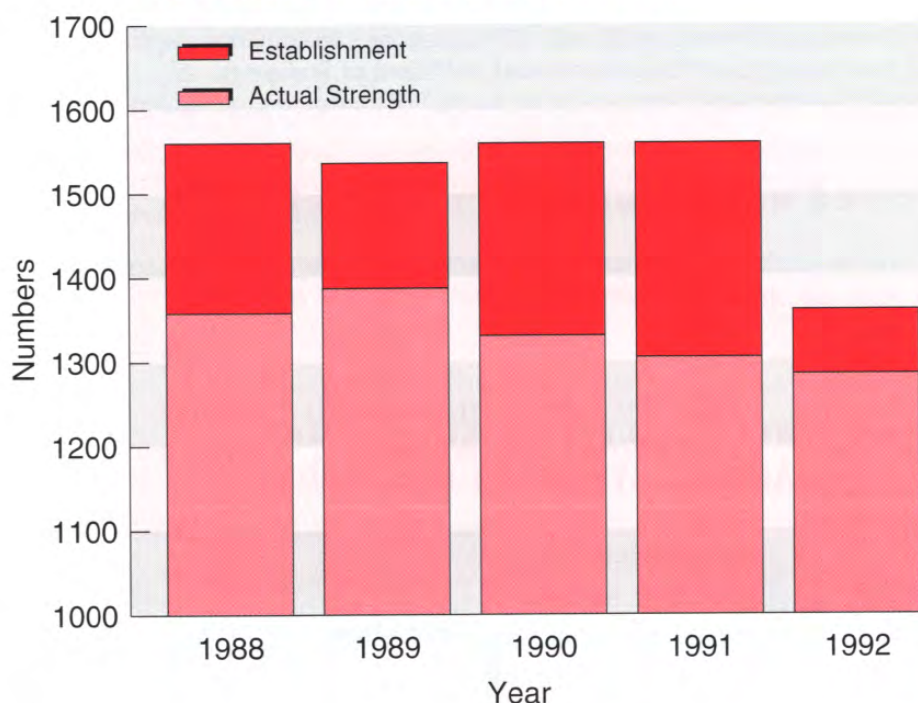
51. As shown in Graph 2, the establishment of retained personnel has not varied greatly in recent years. In 1992 the establishment was 2,553, although the number of persons in post was 2,368. This latter figure indicates, for the second year, a fall in the actual strength of retained personnel.

52. Brigades have had varying degrees of success with their recruitment campaigns, but the general situation recorded by individual brigades often masks local areas where problems exist. During the year a total of approximately 500 applicants were accepted as being suitable for entry. Only 219 firefighters, however, were subsequently recruited into the retained service. While the number of personnel in post is satisfactory, it is becoming increasingly difficult to recruit retained personnel who can provide cover during the working day.

53. The number of female firefighters within the retained service of Scottish brigades is 20 - an increase of 3 from last year.

54. The volunteer establishment and actual strength as at 31 December for the last 5 years are shown in Graph 3.

**GRAPH 3- VOLUNTEER ESTABLISHMENT AND ACTUAL STRENGTH 1988-1992**



55. The total establishment figure for volunteer firefighters was reduced in 1992 by 198 to 1,361. This was due mainly to the decision by Highland and Islands Fire Brigade to lower the crewing levels at volunteer units from 12 to 10 firefighters per unit. The decision was made following a review of the needs and requirements of the various volunteer units in the Brigade, and to bring crewing levels into line with those of other Scottish brigades. Although the total number of volunteers in post throughout Scotland is the lowest for some time, the difference between the establishment and the number actually in post is now only 76.

56. At the end of 1992 there were 31 female volunteer firefighters on brigade strengths. This figure was an increase of 9 personnel above the total for the previous year.

## Control Room Staff

57. During 1992, the establishment figure for Control Room staff rose by 4 to 207. However, there was an increase in the actual strength of 7, giving a total of 208, which comprises 182 female and 26 male staff.

58. Replacement control rooms being built in Tayside, Fife and Highland and Islands Fire Brigades are almost complete as far as the structure is concerned and the respective Brigade Project Teams have been considering the specifications for the new generation of call - receiving, and command and control equipment for the new premises. It is pleasing to note that the brigades concerned are making full use of the information technology expertise available at Regional level.

## Health

59. This year the proportion of the total number of working days lost in Scottish brigades due to sickness affecting wholetime personnel was 5.36%. Although there is some degree of fluctuation in the level of sickness affecting individual brigades, the average for Scotland has not varied greatly over the past 5 years, as shown below.

Year	1988	1989	1990	1991	1992
%	5.00	5.00	5.67	5.65	5.36

60. Brigades have for some time been examining the levels of sickness experienced by their staff and analysing the problem as it affects individuals and the brigade as a whole. In addition, the Inspectorate has been monitoring the situation and recently requested information from brigades on the number of serious injuries to operational personnel. The term "serious injury" has been taken to be an injury which resulted in the person being hospitalised for a period of at least 2 weeks, or which caused an absence from duty for more than one month.

61. The returns indicated that in 1992, 46 wholetime and 11 retained operational personnel received serious injuries. The comparable figures for 1991 were 63 and 7 respectively. Of the 46 wholetime personnel who suffered serious injuries during the year, 15 were injured at fire incidents, 7 during training periods and 24 while on other duties. The injuries affecting retained personnel were received at fires (8) and during training (3). Fortunately no fatal injuries were sustained by on-duty brigade personnel during the year. Obviously much work has still to be done in order to reduce the level of injuries to all brigade staff.

62. I am pleased to report that 6 out of the 8 brigades in Scotland now have an Occupational Health Scheme in operation; sickness monitoring has been introduced and the majority of operational personnel take part in structured fitness training routines.

63. The level of absence due to sickness affecting Control Room staff is not much above that for operational personnel and in 1992 was 6.42% of the total number of working days. While brigades, in assessing the appliance crewing levels, make an allowance for sickness as well as other factors, the same criteria cannot apply to control room staffing assessments. Consequently absences are normally covered by the employment of temporary staff on short term contracts. In view of the complexities of the computer based command and control mobilising systems in a modern brigade control room, the training of temporary staff is of prime importance.

## Discipline

64. During the year, 31 persons were charged with offences under the Fire Services (Discipline) (Scotland) Regulations 1985; this involved a total of 39 charges. The corresponding figures for last year were 24 and 32 respectively.



65. The punishments imposed in respect of the charges were:-

Dismissal	4
Stoppage of pay	5
Reprimand	7
Caution	3

66. In addition to the above, one member resigned voluntarily, one person has lodged an appeal against the punishment imposed and 3 persons were discharged for misconduct other than by way of the disciplinary regulations.

## **Pension Scheme for Firefighters**

67. An updated version of the Pension Scheme for Firefighters came into force on 1 March 1992, the relevant statutory provisions being set out in the Firemen's Pension Scheme Order 1992. The 1992 Order replaces the Firemen's Pension Scheme Order 1973 which has been revoked. The new Order is largely a consolidation of the previous provisions, although the opportunity has been taken to include a number of minor improvements. Copies of a detailed commentary on the provisions of the new Scheme were issued to fire authorities.

## **Equal Opportunities**

68. Recognising the importance of equal opportunities in the fire service - and in particular the need for all sectors of the community to be aware of the fire service as a career and for there to be no direct or indirect barriers to joining or progressing in the service - the Central Fire Brigades Advisory Councils agreed in 1991 to establish an Equal Opportunities Joint Committee. Two meetings of that Committee were held in 1992.

69. The Committee has commissioned 2 research projects. The first project is examining the public image of the fire service and its recruitment procedures while the second is reviewing the operational necessity for imposing height limits for appointment to the fire service. In addition, the Committee will sponsor a seminar to be held in January 1993 for Firemasters, Chief Fire Officers and designated equal opportunities officers from brigades throughout Great Britain. An overall mission statement, which will provide the foundation for ensuring equal opportunities in the fire service is also being developed by the Committee as well as the establishment of goals and targets which will provide a means for monitoring progress being made by brigades. Further definition of these aspects will be pursued in 1993.

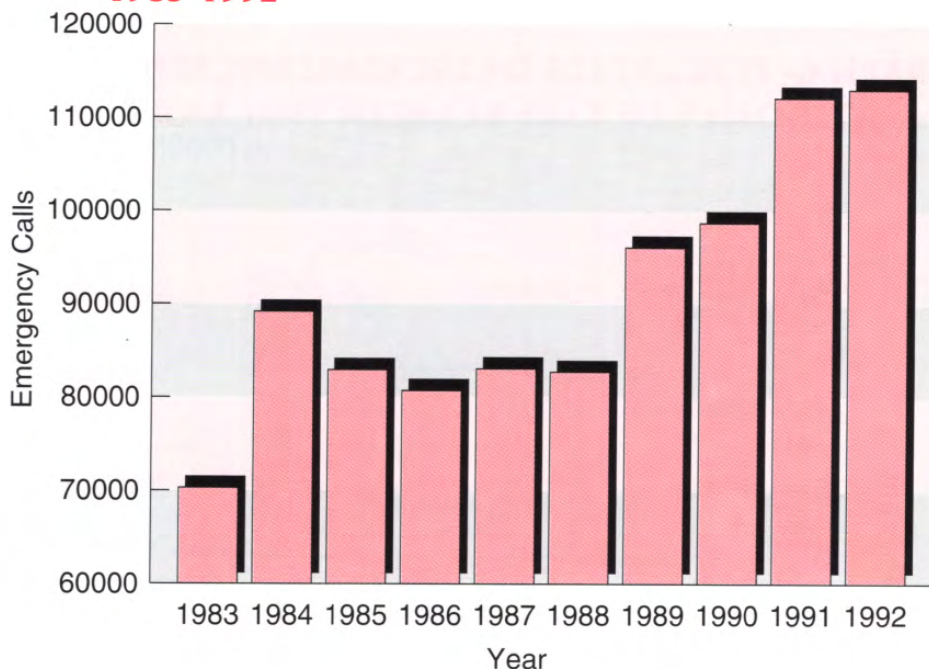
# SECTION C: OPERATIONS

## Fires and Other Emergencies

70. In 1992 the total number of emergency calls resulting in the attendance of the fire brigade was 113,102, a rise of 906 (0.8%) calls over the figure (of 112,196) for 1991 and the highest number of calls ever recorded in Scotland. A detailed breakdown of the number and types of call attended by Scottish fire brigades in 1992 is shown at Appendix 4. It illustrates the operational workload of each brigade within the 7 categories of incident and also shows the numbers of single and multiple fire appliance incidents attended during the year. This latter information provides a broad indication of the size of the fires or the extent of the emergencies with which brigades had to deal. Appendix 5 shows a list of major fires which required the attendance of 6 or more pumping appliances and crews to bring the incidents under control. The total number of fire incidents attended by brigades in 1992 was 52,790. This level represents an 8.8% reduction from the total of 57,896 for 1991 mainly because of reductions in the numbers of chimney and secondary fires.

71. The total number of emergency calls received by Scottish fire brigades during the period 1983-1992 is shown in Graph 4. Over the period the volume of calls increased by approximately 61%. The small increase between 1991 and 1992 is accordingly welcomed.

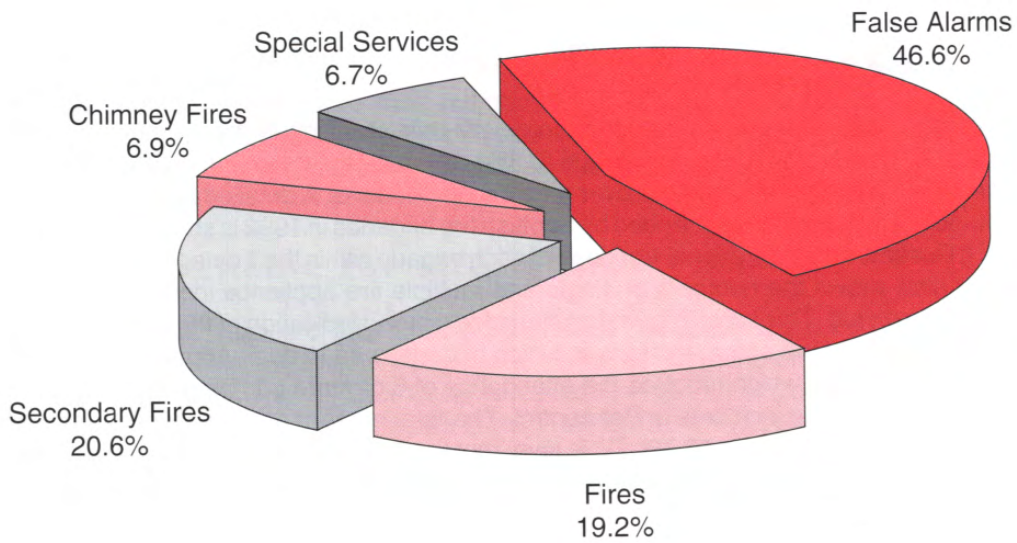
**GRAPH 4-TOTAL EMERGENCY CALLS TO SCOTTISH BRIGADES  
1983-1992**



72. Graph 5 shows the proportions and categories of the total number of emergency calls in 1992. The 3 categories of fires account for 46.7% of the total - this proportion is only marginally higher than the 46.6% accounted for by false alarm calls. Special services represented 6.7% of the total.

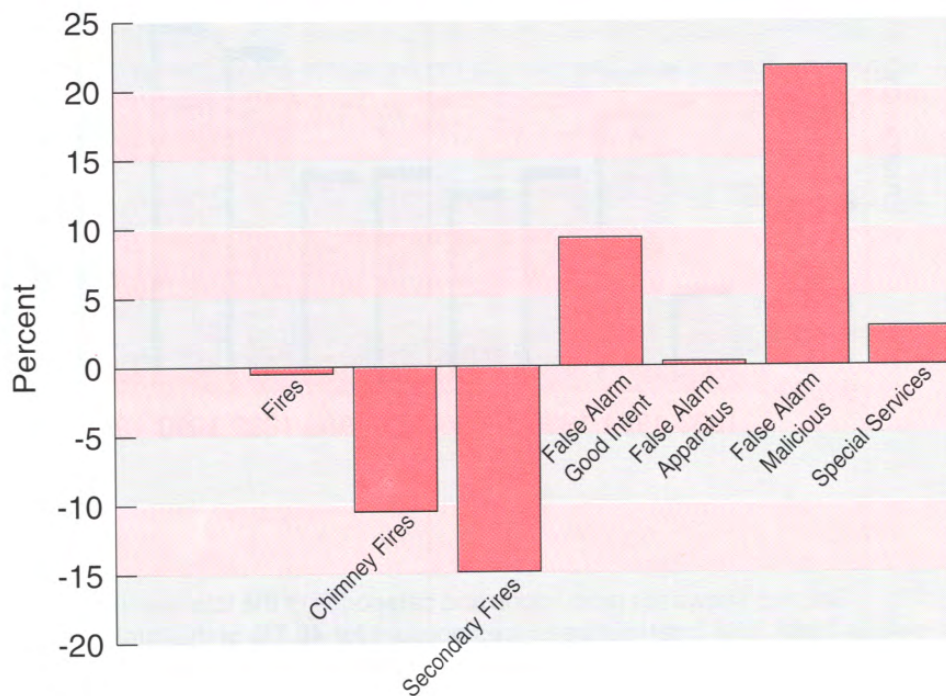


### GRAPH 5- TYPES OF CALL IN 1992



73. As shown in Graph 6 in 1992 there were reductions in each of the categories Fires (ie fires other than secondary and chimney fires), Secondary Fires and Chimney Fires, but it was in the Secondary Fires category that the greatest reduction of 14.9%, occurred.

### GRAPH 6- PERCENTAGE OF INCREASE/DECREASE IN CATEGORIES OF CALL BETWEEN 1991 AND 1992





74. Secondary Fires are, in general terms, fires occurring out of doors and fire outbreaks in derelict property. In these circumstances it will be appreciated that the frequency of such incidents can be influenced greatly by the weather conditions and certainly wide variations in the number of incidents occur from year to year. Over the last decade the number has ranged between approximately 17,500 and 30,500.

75. The number of Chimney Fires attended by brigades also fell during the year to 7,767, a 10.5% reduction from the 1991 level. The incidence of Chimney Fires over the last decade has also been variable influenced no doubt by a number of factors, including the weather and the move away from coal fire heating in dwellings. The range of variation is, however, much less than for Secondary Fires. The proportion of Chimney Fires varies greatly between brigades in Scotland. For example, during 1992 the proportion of Chimney Fires to the total number of fires attended ranged from 6.8% in Strathclyde to 56.8% in the Highland and Islands Fire Brigade.

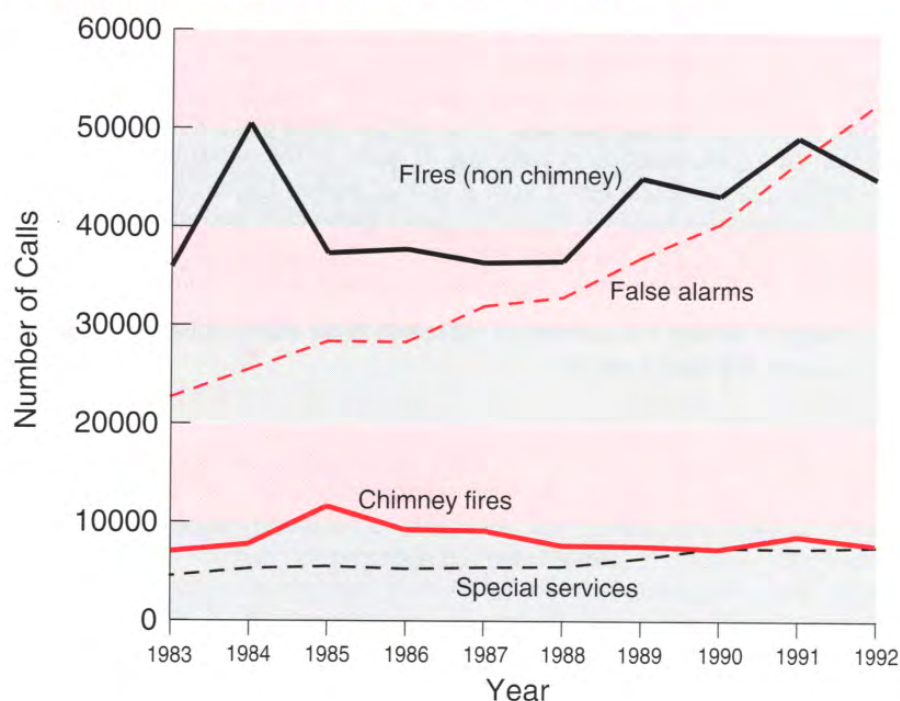
76. While the reduction in the number of fires in Scotland is welcomed, the substantial increase in the number of false alarm calls gives much cause for concern, not only in terms of the total incidents but also because of the rate of these annual increases. Appendix 4 gives figures for 1992 for the 3 categories of false alarms - Good Intent, Apparatus and Malicious.

77. Good Intent calls are where the caller is genuinely concerned, although mistaken, that an outbreak of fire has occurred; Apparatus calls are where the brigade is called due to a fault in a fire warning system; and the Malicious false alarm calls are where the person calls the brigade knowing that a fire or other emergency does not exist.

78. During 1992 the total number of false alarm calls accounted for almost half (46.6%) of the total number of emergency calls made to brigades.

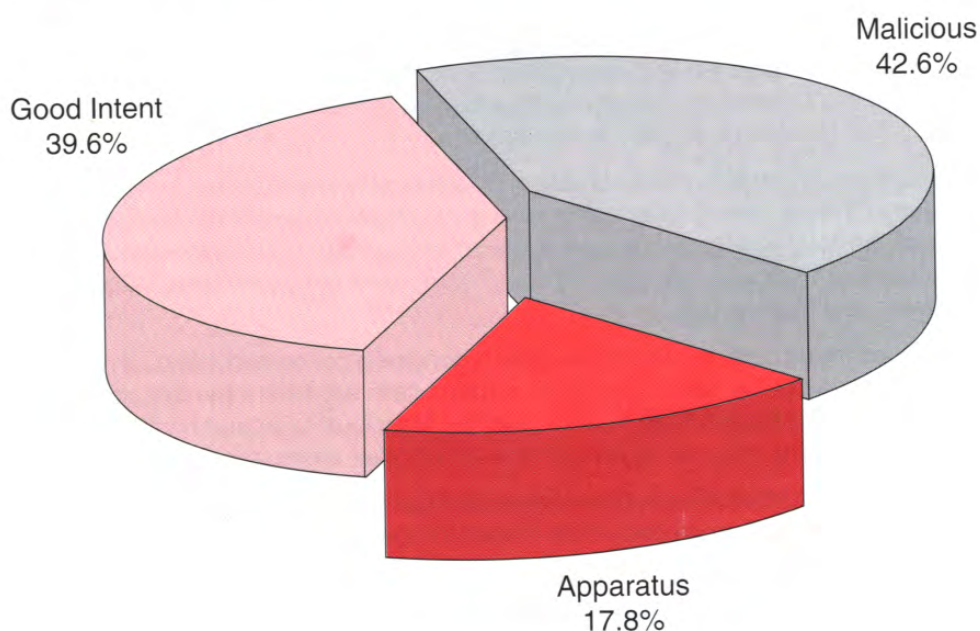
79. Graph 7 shows the nature and the incidence of the calls received by brigades from 1983 to 1992. It shows clearly the continuing rise in the number of false alarm calls in that period, from 22,763 in 1983 to 52,750 in 1992 - a 132% increase in the 10 year period.

**GRAPH 7- BREAKDOWN OF CALLS 1983-1992**



80. Graph 8 indicates for 1992 the proportion of the total false alarm calls reported by each category.

### GRAPH 8- FALSE ALARM CALLS IN 1992



81. Although the proportion of Good Intent calls is high at 39.6%, and the number of such calls has risen considerably over the decade, it would be wrong to discourage in any way those persons who call the brigade in the genuine belief that an emergency incident has occurred.

82. Apparatus calls accounted for 17.8% of the total false alarm calls for 1992, but the volume of such calls has increased steadily over the past 5 years from 7,099 in 1988 to 9,359 in 1992. While the increase in the number of fire alarm installations will produce the potential for an increase in calls due to faults in the apparatus, I consider that in many instances the faults result from a lack of proper maintenance of the system or from badly designed systems. Brigades record these calls and will approach the owner of an installation whose fire alarm apparatus generates an above normal number of false calls, with a view to achieving an improvement in that situation.

83. Table A shows the number of Malicious false alarm calls received by Scottish brigades over the past 5 years.



TABLE A - Malicious False Alarm Calls 1988-1992

	1988	1989	1990	1991	1992
Central	655	693	623	595	567
Dumfries and Galloway	202	239	255	283	255
Fife	780	886	707	997	1,108
Grampian	507	431	530	613	616
Highland and Islands	223	183	259	395	347
Lothian and Borders	2,485	2,705	3,724	3,206	2,107
Strathclyde	7,560	7,889	8,179	11,370	16,349
Tayside	518	769	964	1,022	1,136
Totals	12,930	13,795	15,241	18,481	22,485

84. The continuing rise in Malicious false alarm calls is disappointing, not only in its waste of brigade resources and increased operating costs, but also in view of the fact that all brigades have taken steps to deal with this problem, through publicity and educational programmes; some with more success than others. The number of Malicious calls received by brigades in 1992 totalled 22,485, a 21.7% increase above the figure for 1991. Increases in the number of these calls took place in Fife, Grampian, Tayside and Strathclyde (where a 43.8% rise was experienced). In contrast to these increases, reductions were recorded in the 4 remaining brigades, with the Central and Lothian and Borders areas having decreases for the second year in succession. The Lothian and Borders Fire Brigade in particular experienced a 13.9% fall in the number of Malicious calls in 1991 and a further reduction of 34.3% in such calls in 1992. The Brigade considers that this may reflect the efforts made in their ongoing campaign, relating to false alarm calls and which is targeted at schoolchildren.

85. It is of course an offence for any person to knowingly give, or cause to be given, a false alarm of fire to a fire brigade and, as stated in previous reports, 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 would be the introduction of communications systems which improved the means of identifying the source of the call.

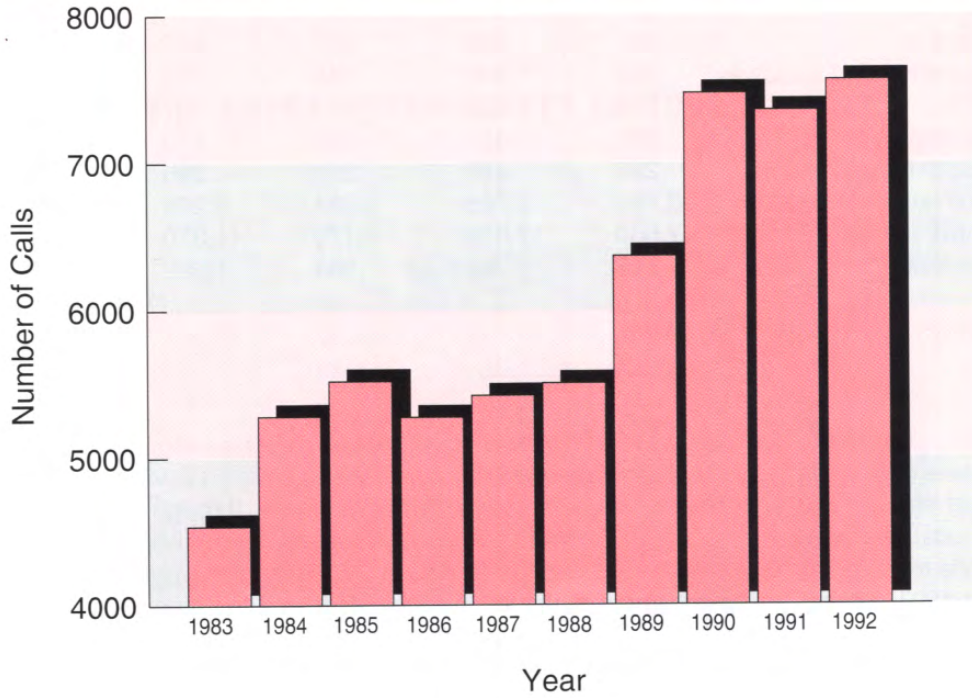
86. That means of identification is now available and, to date, with a few exceptions, telephone exchanges throughout Scotland covering the majority of telephone users are provided with digital equipment. It is expected that this programme will be completed by 1994. It is of course too early to evaluate the benefits which may come from the provision of these digital exchanges. They appear, however, to be the best hope of reducing the number of Malicious calls received by brigades, particularly if their introduction is supported by campaigns to bring to the attention of schoolchildren and others the problems and the penalties which can arise from making Malicious false alarm calls.

## Special Services

87. An increasing number of fire service calls are for special services, that is, 'non-fire' situations where fire service expertise and equipment is required to render humanitarian service when requested by the police, ambulance personnel or members of the general public. Scottish fire brigades attended a total of 7,562 of these special service calls in 1992 which accounted for 6.7% of the total emergency calls received (see Appendix 4 and Graph 5). The 1992 figure was 2.8% higher than the corresponding figure of 7,356 for 1991. Graph 9 shows the increase in the number of special service calls attended over the past 10 years.

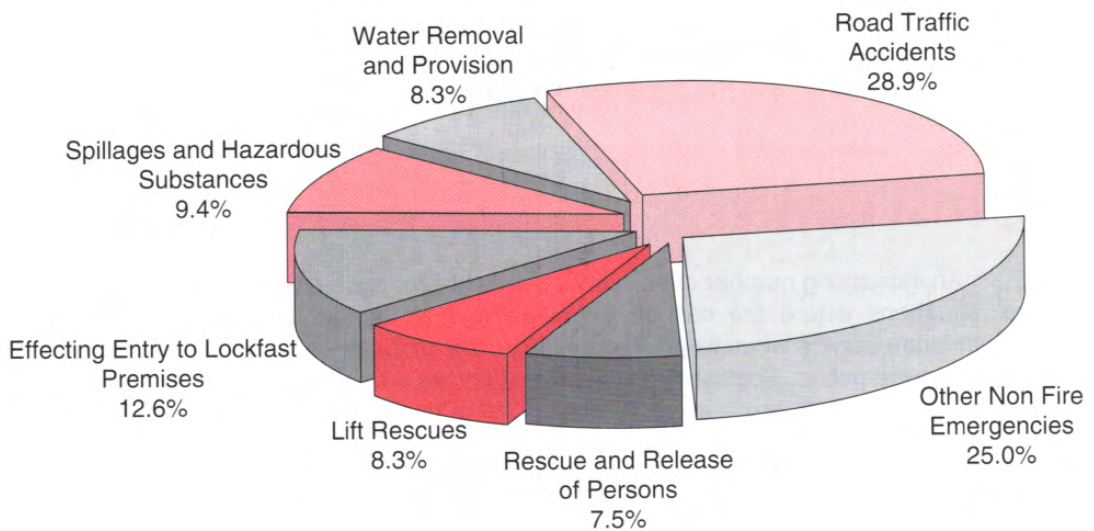


**GRAPH 9- SPECIAL SERVICE CALLS 1983-1992**



88. Graph 10 shows the percentage and number of calls in each category of special services. Included in the various headings are a total of 91 calls to incidents involving radioactive material or other hazardous substances.

**GRAPH 10- SPECIAL SERVICE CALLS IN 1992**



## Road Traffic Accidents

89. Road traffic accidents accounted for 28.9% of special service incidents in 1992. 2,184 road accidents were attended by brigades; this was an increase of 43 over the total for the previous year. Details of the number of road accidents and the number of fire deaths as a result of road accidents over the past 5 years are shown in Table B. There were 12 fire deaths resulting from road traffic accidents in 1992 - the highest figure over the last 5 years.

TABLE B - Number of Road Traffic Accidents Attended and Resultant Fire Deaths 1988-1992

	1988	1989	1990	1991	1992
Number of road traffic accidents attended	1,697	2,086	2,170	2,141	2,184
Number of fire deaths as a result of a road accident	3	11	8	10	12

## Rescues

90. During 1992 fire brigades rescued 1,957 persons from emergency situations. Table C provides comparative information for the period 1988 to 1992 including a broad indication of the circumstances in which the rescues were undertaken. The number of rescues in 1992 was the lowest figure over the last 5 years - and was 501 fewer than in 1991. In 1992 reductions were noted for each of the categories listed.

TABLE C - Number of Persons Rescued from Emergency Situations 1988-1992

Rescues	1988	1989	1990	1991	1992
Fires	685	659	766	654	559
Other dangerous situations where no fire was involved	711	495	526	987	706
Road Traffic Accidents	704	819	886	817	692
Totals	2,100	1,973	2,178	2,458	1,957

91. I take this opportunity to compliment the members of each of the 3 emergency services - Police, Ambulance and Fire - for the inter-service liaison which has developed over the years and which allows the organisations to work in close co-operation at road accidents and other emergency incidents where members of the public are at risk.

## Fire Damage in the United Kingdom

92. The Association of British Insurers has estimated that the monetary loss from fires in the United Kingdom, reported to the Association, in 1992 was £850.2 million, a 16.5% reduction from the record level of 1991. Separate figures for Scotland are not available.



93. The annual losses for the 5 year period 1988-1992 were as follows:-

1988	1989	1990	1991	1992
£645.9m	£792.4m	£1005.2m	£1018.0m	£850.2m.

94. 1992 was the first year since 1985 in which the figure of monetary fire loss did not exceed the total for the preceding year, and it is, therefore, a welcome check on the steeply rising trend of past years. Prior to 1992 the average rate of increase in the cost of fire damage from 1988 to 1991 was approximately 17%.

95. In a report on fires having a fire loss in excess of £50,000, the Fire Protection Association indicates that from 1986 to 1990 the occupancies most severely hit by the losses caused by fire were:-

- i. Education;
- ii. Engineering;
- iii. Retail Distribution;
- iv. Transport and Communication;
- v. Food, Drink and Tobacco Manufacture; and
- vi. Dwellings.

96. Occasionally it is argued that the cost of fire damage does not affect a normal family or the man in the street, but an examination of the occupancies mentioned above shows the falseness of that contention. For example, the loss of a school due to fire affects not only the community in the immediate vicinity of the outbreak but also the residents of the Region who contribute to the education budget for the area. Similarly, fire losses in the industrial and commercial sectors can raise costs to consumers in general, as well as affecting the jobs of local people.

97. The causes of fire must be tackled, whether they be deliberate or accidental, but it must also be recognised that it is not possible to eliminate all potential risks. With the increasing cost of fire damage, society cannot afford to rely solely on the response of the fire service. A delay in discovering an outbreak of fire can result in delays in calling the fire brigade with a consequent increase in the extent of the outbreak and the costs of the damage.

98. Modern technology has given us very sophisticated systems capable of automatically detecting and giving warning of an outbreak of fire. In addition, communications systems can quickly and accurately transfer that warning to the emergency services, whose speed in attending an incident can be assisted, for example, by controls over traffic light systems. Also active fire defence systems such as sprinkler installations can hold a fire in check until the arrival of the fire brigade, thereby limiting the development and spread of the outbreak and restricting the damage caused.

99. Linking the principles of early detection and early attack on an outbreak of fire, and using modern technology and risk assessment techniques, must have an impact on excessively high fire costs.

100. An overnight change cannot be expected, but I urge and encourage the implementation of these important, although basic, principles.

## **The Arson Prevention Bureau**

101. The Arson Prevention Bureau was established in February 1991 following a recommendation of a Home Office committee which enquired into the rise in the number of criminal fire raising acts in the United Kingdom.

102. Since its establishment in 1991 the Bureau has instituted a number of initiatives under the direction of working groups to look at specific aspects of fire raising. These included the following matters.

- i. A major research project is being carried out on behalf of the Department of Education and Science to establish more reliable data on the true incidence of fire raising in schools. The research by Sheffield University will provide information on how to prevent further attacks of this type.
- ii. A statistics gathering exercise was started early in 1992 to establish the extent and cost of fraudulent fire raising. Loss adjusters in the United Kingdom will provide details to the Bureau of all deliberate fires costing more than £50,000, differentiating between vandalism/intruder type fires, and those where the motive might possibly be fraud.
- iii. As a means of reducing the incidence and cost of deliberate fires in industrial, commercial and public buildings the Bureau is producing 2 documents. The first, which is intended for managers in the industrial and commercial sectors, will provide comprehensive guidance on how to identify risks facing a building and the remedial return necessary. The second document will be a simple leaflet giving basic information and will direct small insured businesses to reliable sources of information and help.
- iv. A survey to be carried out by the Bureau of current procedures within police forces and fire services when investigating suspicious fires.

103. During the year the Bureau also indicated areas for future research. These included:-

- i. profiling wilful fire raisers;
- ii. counselling child offenders; and
- iii. training for Loss Adjusters in fire investigation.

104. The criminal act of wilful fire raising is still a major cause of fire in Scotland. The most recent statistical returns for the United Kingdom show that in Scotland during 1991, 25.4% of the total number of fires in occupied buildings were recorded as having a malicious or deliberate cause. The comparable figure for England and Wales during that year was 22.7%. Although this higher proportion of malicious fires has persisted in Scotland for some years, it has not been possible to offer an explanation for this unfortunate feature.

105. The numbers of fires in occupied buildings in Scotland which were caused by wilful fire raising during the 5 year period 1987-1991 were:

1987	1988	1989	1990	1991
2,829	2,963	3,492	3,506	3,619

106. These figures show the rising trend over the years which have produced an average annual rate of increase of 6.5%.

107. The cost of fire damage is indicated elsewhere in this report, and while it is true that a high percentage of the most costly fires caused by wilful fire raising occur in industrial, commercial and education buildings, the occupancy in Scotland most affected by malicious or deliberate fires is dwellings.

108. During 1991 more than half (52.1%) of the malicious fires in occupied buildings involved people's homes. These criminal acts, whether they involve the ignition of waste material accumulated in a block of flats or another serious form of fire vandalism, endanger people's lives and property. Every effort must therefore be made to apprehend those who commit these offences, but it is also necessary to avoid creating opportunities for the fire vandal. Education, the security of premises and good housekeeping measures are essential as well as the co-operation between the police, fire brigades and local communities in meeting this challenge.



# SECTION D: FIRE SAFETY

## Background

109. The fire safety work carried out by brigades, on behalf of the fire authorities which have direct legal responsibility, is derived from 2 separate statutes - The Fire Precautions Act 1971 and The Fire Services Act 1947.

110. The Fire Precautions Act 1971 made fire authorities responsible for enforcing the provisions of the legislation in all premises falling within its scope, other than Crown premises. In general terms the 1971 Act requires that premises covered by a designation order must have a certificate from the fire authority relating to the fire precautions within the property. It is, of course, an offence to put the premises to a designated use without a fire certificate being in force to cover that use, or without having applied for such a certificate. At present the uses of premises designated under the terms of the Act and for which a fire certificate is required are factories, offices, shops and railway premises, where people are employed and in which the aggregate number of persons at work at any one time exceeds 20, or in which at any one time the aggregate number of persons at work, elsewhere than on the ground floor of the building, exceeds 10. Factory premises in or under which explosive or highly flammable material is stored or used are also certifiable, irrespective of the number of persons at work there. In addition hotel and boarding house premises described in a designation order, in terms of the sleeping accommodation provided for guests or staff, are also required to be certificated by the fire authority. Fire authorities have powers under the 1971 Act to set aside, or grant exemption from, the requirement to have a fire certificate, but only in specified circumstances. The 1971 Act also makes fire safety provisions for the smaller types of factories, offices, shops and railway premises which are outwith the scope of the certification procedures previously described. As for certifiable premises, the enforcement of the legislative requirements for the smaller types of premises rests with the fire authorities.

111. The Fire Services Act 1947, among its many provisions, places a duty on fire authorities to make efficient arrangements for giving, when requested, advice in respect of buildings and other property in the area, on fire prevention, restricting the spread of fire, and means of escape in case of fire. This more general responsibility covers a wide range of subjects and generates a substantial workload for fire brigades which have been delegated the responsibility by the fire authorities.

112. The following are among the many areas in which Brigade Fire Safety Officers may be involved.

- i. Advising local authorities on appropriate fire safety precautions for premises to be licensed by them, for example:-
  - a. The Licensing (Scotland) Act 1976;
  - b. The Caravan Control of Development Act 1960;
  - c. The Civic Government (Scotland) Act 1982;
  - d. The Cinematograph (Safety) (Scotland) Regulations 1985;
  - e. The Safety of Sports Grounds Act 1975;
  - f. The Housing (Scotland) Act 1988;
  - g. The Gaming Act 1968.
- ii. Advising architects on the fire safety precautions required for new building developments and for alterations to existing premises.
- iii. Giving advice to organisations or individuals on fire safety subjects.

113. Although not a statutory obligation, fire brigades are also involved in promoting fire safety themes generally, but particularly for domestic occupancies where the incidence of fire outbreaks and deaths due to fire is highest. Recently The Scottish Office Home and Health Department, together with brigades, have concentrated much of their efforts on encouraging the installation and maintenance of smoke alarms in dwellings, in order to give the occupiers the earliest possible warning of an outbreak of fire in their homes and to allow the maximum time for an evacuation.

114. Community related fire safety programmes have been introduced by brigades to address local problems with the assistance of those who live in the area. These programmes involve young people, adults and the elderly, as well as the education authorities and social work organisations. The funding for these activities may be from the local authority, by sponsorship, or through urban aid projects. The development and, most essentially, the continuation of the community programmes will, it is hoped, address Scotland's poor fire safety record by increasing people's awareness of the dangers of fire and the measures necessary to avoid such an outbreak.

## Fire Safety Inspections of Premises

115. During 1992, brigades inspected 77,419 premises for fire prevention purposes - a decrease of 1.9% compared with the 1991 figure of 78,906.

### Certifiable Premises

116. Table D shows the statistical position in Scotland regarding the certification of factory, office, shop, railway premises and hotels and boarding houses which fall within the scope of Section 5 of the Fire Precautions Act 1971.

TABLE D - Certification of Premises Under Section 5 of the Fire Precautions Act 1971

	Total Certifiable Premises	Total Certificates Issued	Total Certificates Issued in Current Year	Total Premises Subject to Routine Inspection in Current Year
Factories	4,849	4,453 (91.8%)	174	1,695
Offices, Shops and Railway Premises	15,748	14,014 (89.0%)	746	5,142
Hotels/Boarding Houses	4,703	4,568 (97.1%)	108	4,254
Totals	25,300	23,035 (91.0%)	1,028	11,091

117. Although a high percentage of the premises falling within the scope of Section 5 of the 1971 Act have now been certificated, fluctuations in the numbers of premises within each category occur, due to new applications being submitted, premises closing, or due to the premises no longer falling within the scope of the certification procedures.

118. At the end of 1992 a total of 2,265 premises had still to be issued with a fire certificate. Almost 75% of these premises, however, had been inspected by the brigades and the process leading to the certificates being issued, had therefore been put in hand.

119. It will also be noted from the table above that during the year 11,091 premises were inspected on a routine basis to ensure that the terms and conditions of the fire certificate were being maintained. Following these "routine inspections", or due to the notification of changes to the premises given by the holder of a fire certificate, it was necessary to revise or update the contents of 1,529 certificates.



120. Under the terms of Section 5A of the 1971 Act, the fire authority may grant exemption from the requirement to have a fire certificate, to certain qualifying premises. The authority must, however, have regard to all the circumstances of each case and, in particular, the degree of seriousness of the risk, in the event of fire, to persons on the premises. In releasing these prescribed and low risk premises from the certification procedures, fire authorities are able to use their resources more appropriately on premises having a higher fire risk assessment. The total number of premises in Scotland which have been granted an exemption is 111 - a very low figure - and I consider that the potential exists for a substantial increase in the number of exemptions granted. Brigades will be encouraged to review their policies on this matter and on the manner in which premises qualifying for exemption are handled.

#### Non-certifiable Premises

121. Factories, offices, shops and railway premises outwith the scope of the certification procedures of the Fire Precautions Act 1971 are still subject to the basic fire safety provisions of the legislation. During the year, 4,573 of these premises were subjected to an initial or routine inspection, but the responsibility for complying with the law rests clearly with those who operate the premises. Guidance on meeting and maintaining appropriate fire safety standards in these premises is given in the Home Office/The Scottish Office Home and Health Department publication "Code of Practice for Fire Precautions in Factories, Offices, Shops and Railway Premises not required to have a Fire Certificate" and compliance with the contents of this Code of Practice is in general terms deemed to satisfy the provisions of the 1971 Act for non-certifiable premises of this type.

#### Other Inspections

122. As indicated in the summary to this Section, brigades are consulted by other authorities on the application of fire safety standards to premises subject to separate legislative control or regulation. The following Table E shows the number of such premises inspected by brigades during the year, together with the legislation under which the consultations took place.

TABLE E - Other Premises Inspected 1992

<b>Legislation</b>	<b>Number of Premises Inspected</b>
Safety of Sports Grounds Act 1975	78
Licensing (Scotland) Act 1976	6,269
Gaming Act 1968	590
Theatres Act 1968	249
Civic Government (Scotland) Act 1982	1,955

123. The number of building plans on which reports were prepared by brigades during 1992 was 9,992.

## **Offences and Prosecutions**

124. During the year one prosecution under the Fire Precautions Act 1971 was successful in a case against a hotel owner in the Grampian Region. There were, however, a number of actions initiated under the terms of Section 10 of the 1971 Act, which allows fire authorities to issue a prohibition notice, prohibiting or restricting the use of a building or part of a building where, in the opinion of the authority, the use of the premises presents a serious risk to persons in the event of fire.

125. In 1992, 5 hotels, 6 factories, 3 offices, 8 shops and 5 houses in multiple occupation were the subject of action under Section 10 of the 1971 Act. In some of the cases immediate action on the part of the occupier was able to remove or rectify the potential danger to people before the formal notice was issued.

## Fire Fatalities

126. Details of fire fatalities - analysed by age group, location and month of occurrence - for each brigade are shown in Appendix 6. During 1992, 119 people died in fires attended by fire brigades in Scotland. This total is 20 (14.4%) fewer than that of the previous year and continues a welcome, if variable, downward trend in the number of fire deaths since 1987. There is, however, no room for complacency since Scotland has, proportionately, a much higher number of deaths due to fire than England and Wales. The reduction in deaths occurred in four Scottish brigades - Central, Highland and Islands, Lothian and Borders and Strathclyde, with the reductions in Strathclyde and in Lothian and Borders being of particular significance - 19(26.4%) and 5(27.8%) respectively.

127. During 1992 fires in the home accounted for 99(83.2%) of the total number of fire deaths, with the balance of the fatalities occurring in road vehicles (12), industrial premises (3), hospitals (3), a residential home (1) and a derelict building (1).

128. Incidents involving multiple deaths also fell from 11 in 1991 in which 30 people died, to 6 in 1992 in which 14 persons were killed. Five of these incidents occurred in dwellings, while one was the result of a road traffic accident in which 2 people died.

129. Table F shows the total number of fire deaths in each of the brigade areas over the last 10 years.

TABLE F - Number of Fire Deaths by Brigade 1983-1992

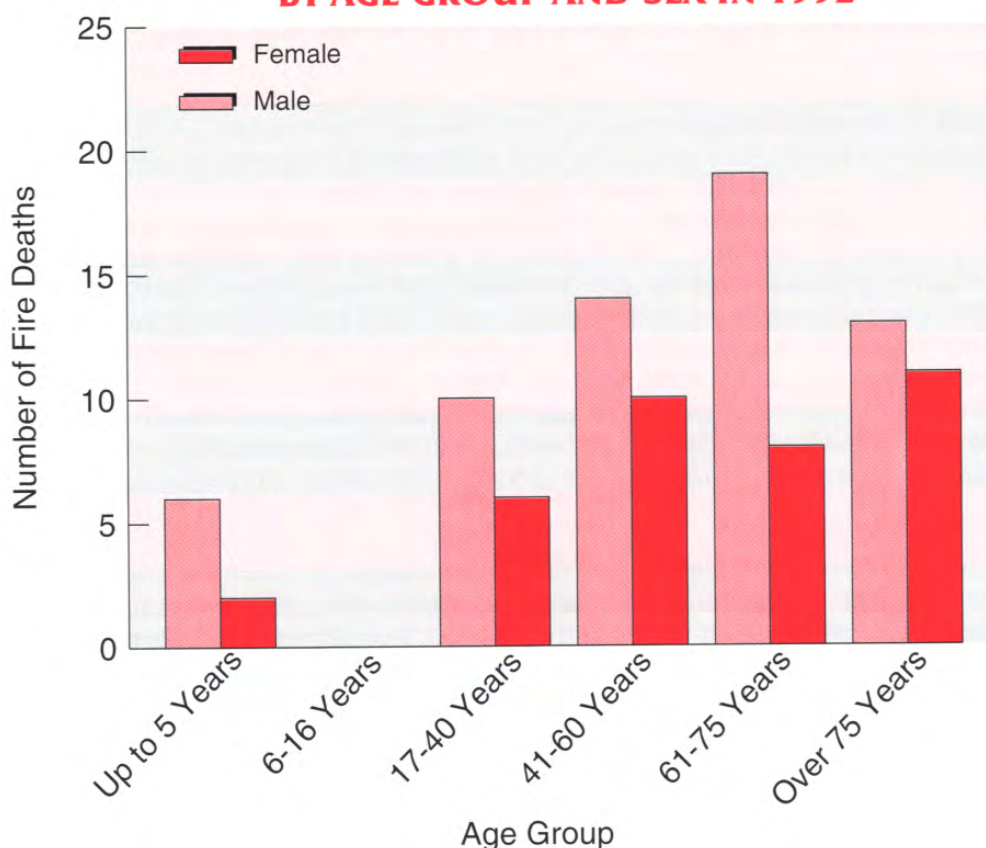
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Central	5	9	5	9	17	11	4	4	9	8
Dumfries and Galloway	4	2	8	2	4	7	1	8	3	3
Fife	7	7	6	9	12	11	6	5	7	11
Grampian	12	8	18	11	12	12	12	11	11	13
Highland and Islands	11	10	11	9	5	10	9	6	12	10
Lothian and Borders	26	26	23	29	21	26	19	22	18	13
Strathclyde	72	89	89	87	83	69	56	73	72	53
Tayside	18	13	11	9	14	4	6	4	7	8
Totals	155	164	171	165	168	150	113	133	139	119

### Fatalities Due to Fires in Dwellings

130. The total number of fire deaths which occurred in premises used as dwellings dropped from 122 in 1991 to 99 in 1992, a reduction of 18.9%. As in previous years the risk to life from outbreaks of fire continues to increase dramatically as age increases. Graph 11 shows the total number of fire deaths in each of the age groups, during 1992, together with the sex of the victims.



**GRAPH 11- TOTAL FIRE DEATHS IN DWELLINGS BY AGE GROUP AND SEX IN 1992**



131. Graph 11 highlights the need for extra care and vigilance in the prevention of fire outbreaks where elderly people are concerned and in this respect, the care of families, friends and home helps is vitally important, by gently supervising and encouraging commonsense fire safety practices, especially in the use of heating appliances and smoking materials.

132. It must also be remembered that irrespective of the early warning of fire which smoke alarms can give, the time taken by elderly people to respond to the warning will often be longer than that of younger people, due to confusion, infirmity or disorientation. In these circumstances early assistance from an outside source could play an important part in reducing the number of deaths affecting this age group.

#### Fatal Fires - Area in Which Fire Started

133. During 1992 there were 92 fire incidents in dwellings which resulted in fatalities. The areas in which the majority of the outbreaks of fire originated were:-

	<i>Number of Incidents</i>	
Living Rooms or Lounges	47	(51.0%)
Kitchen Areas	18	(19.5%)
Bedrooms	11	(11.9%)
Bedsit Areas	4	(4.3%)

Although an outbreak of fire in any of these rooms has the potential for development and spread, the room in which an outbreak of fire presents a particular hazard is the living room or lounge, where the nature of the furnishings such as polyurethane foam in lounge suites, as well as the quantity of combustible material present provides ample fuel on which fire can feed.

134. Although the introduction of the regulations which control the use of polyurethane foam in upholstered furniture took place in 1988, it is unlikely that the effects of the new

standards will become apparent for at least 10 years, that is until there has been a substantial replacement of the furniture currently in use.

135. The statistical information in paragraph 133 shows clearly that any extension to a basic smoke alarm system in a dwelling should be to cover living room areas as well as the exit passageways. It also confirms the fire safety advice that the doors of these and other rooms should be kept closed, especially at night, in order to contain an outbreak of fire.

Causes of Fatal Fires

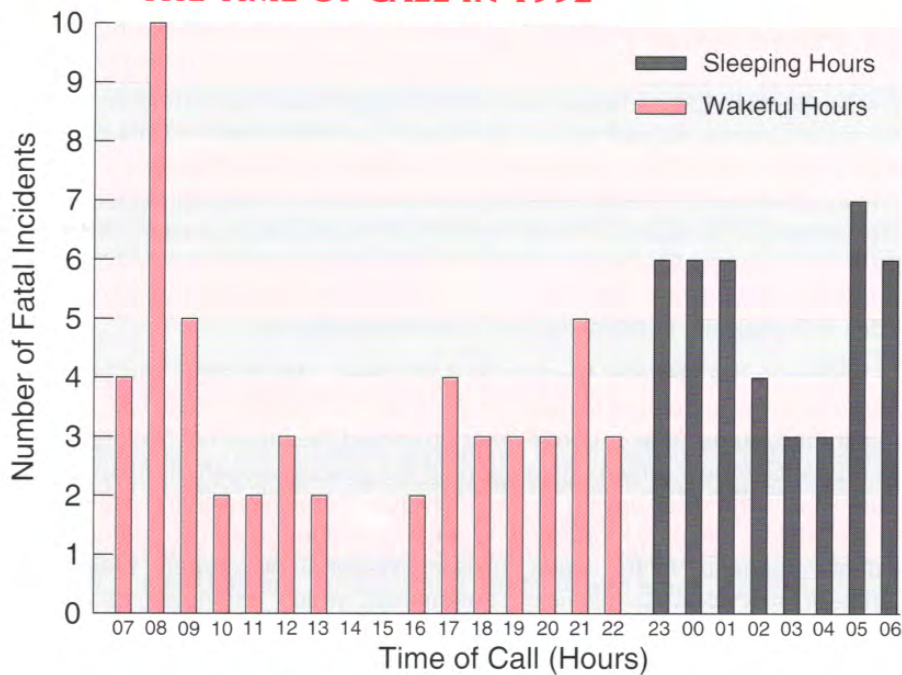
136. The most common causes of the 92 fire incidents which killed people in 1992 were:-

	<u>Number of Incidents</u>	
Carelessness in the use of smokers' materials	47	(51.0%)
Overheating of pans left unattended on cooker	11	(11.9%)
Faulty space heating appliances or the misuse of space heating appliances	8	(8.6%)
Wilful fire raising	5	(5.4%)
Faulty electric blankets	4	(4.3%)

137. It is unfortunate that in the majority of the cases it was the actions or inaction of people - through a careless act or a failure to maintain equipment - that led to the outbreak of fire and the subsequent fatal result. In some cases other factors influenced or contributed to the situation, such as the consumption of alcohol and its effects in reducing both responsible behaviour and an awareness of danger, or illness and frailty which affected the victims' ability to respond to the hazardous situation. The statistical analysis also shows that over 50% of those who died in fires were alone at the time of the outbreak.

Times of Call to Fire Death Incidents

**GRAPH 12- NUMBER OF FATAL INCIDENTS RELATED TO THE TIME OF CALL IN 1992**





138. Graph 12 shows the number of fire death incidents in 1992 analysed by the time of call as recorded by brigades. The period between 0800 hours and 0900 hours shows clearly as the "peak period" for fatal incidents, with a fall-off to mid-afternoon before rising again as the evening and night progress. Assuming the "wakeful hours" to be between 0700 hours and 2259 hours, and the "sleeping hours" to be from 2300 hours till 0659 hours, it is found that 55.4% of the fatal fire incidents have times of call during the wakeful hours, with 44.6% during sleeping hours.

## Smoke Alarms

139. The Scottish Office Home and Health Department's publicity campaign to encourage the installation of smoke alarms in dwellings has been proceeding vigorously for some time with substantial support from the Scottish fire brigades. It is now estimated that 60% of the total number of dwellings in Scotland have been fitted with these devices and, while much progress has been made, it is essential that the momentum of the campaign should be maintained and that the message encouraging the testing and maintenance of the smoke alarms should receive equal prominence.

140. During the year, of the 92 dwelling fires in which people died, only 26 (28.6%) of premises had been fitted with smoke alarms. It is also noted, with concern, that of these 26 installations only 8 alarms were considered to have functioned correctly to give warning of fire. A lack of maintenance or a faulty or disconnected battery rendered the remaining smoke alarms ineffective. Officers of the brigades investigating these fires have estimated that in 63 of the 92 fire death incidents, the installation of a properly maintained smoke alarm system within the premises could have given an early warning of the outbreak of fire to which the occupants could have responded.

141. It is intended in the near future that the Scottish Building Regulations will require the installation of a hard wire smoke alarm system in the construction of all new houses. Although self-contained battery powered smoke alarms can work well, there is growing concern that the protection afforded by these devices is often lost due to the removal of batteries, or the failure to test and maintain the smoke alarm system and replace spent batteries.

142. I commend the work done by brigades in this matter and encourage their further efforts.

## Education and Publicity

143. The Scottish Office Home and Health Department, as part of its 1991-92 fire safety campaign, promoted a series of television and radio commercials in January and February 1992. Lord James Douglas-Hamilton MP, the then Minister for Home Affairs and the Environment at The Scottish Office, launched the campaign which encouraged people throughout Scotland to install smoke alarms in their homes to help ensure the safety of their families. The radio campaign also highlighted the need to maintain smoke alarms after they had been installed. The Department continued to supply the 8 Scottish brigades with publicity material for use in local campaigns.

144. Following the General Election in April 1992, The Rt Hon The Lord Fraser of Carmyllie QC was appointed Minister of State at The Scottish Office with responsibility for Health and Home Affairs. Lord Fraser promoted the launch of National Fire Safety Week (19-24 October), which again adopted the general slogan of "FIRE COSTS.....", with each day in the week having its own individual theme highlighting a different aspect of fire prevention. National Fire Safety Week was supported and promoted by brigades throughout Scotland. In the week following National Fire Safety Week 1992, the Department sponsored a television commercial which attempted to reinforce the message of the need to "install a smoke alarm".

145. As well as participating in the nationally led fire safety campaigns, brigades in



Scotland initiated many local events and maintained a number of their ongoing promotions on fire safety themes. Although it is not possible to record all of the projects, the following items indicate the range of events and promotions held by brigades during the year.

Central Fire Brigade had a "new deal for the disabled" in which smoke alarms were installed voluntarily by brigade personnel. In addition, an urban aid funded fire safety unit of the Brigade visited primary schools in the Region and was involved in various community orientated activities.

Dumfries and Galloway Fire Brigade had a community liaison schools programme and fire safety competitions through local radio, television and press.

Fife Fire and Rescue Service attended a number of events such as fetes and galas, promoting fire safety themes; they were also involved with Age Concern groups and with training for Community Carers.

Grampian Fire Brigade continued with their campaign on the fitting and maintenance of smoke alarms in dwellings and was successful in obtaining local sponsorship for a fire safety bus, operating as part of the public transport fleet but having fire safety messages painted on its bodywork.

Highland and Islands Fire Brigade used their mobile display unit at various locations within the Brigade's area and were involved in a "Winter Emergencies Campaign", with the Highland Regional Council.

Lothian and Borders Fire Brigade continued with their comprehensive programme of fire safety education in schools. It is perhaps partly due to this programme that the number of malicious false alarm calls to the Brigade was reduced in 1991 and again in 1992.

Strathclyde Fire Brigade entered their project "Bridging the Gap to Save Lives" as part of the Royal Anniversary Challenge which commemorated the 40th Anniversary of the Queen's accession to the Throne. The 3 year project involves the installation of smoke alarms in dwellings within areas considered to be most at risk. The Brigade's initiative in this project earned a Gold Medal and National Winner's Certificate from the Royal Anniversary Trust.

Tayside Fire Brigade continued with their involvement in community projects as part of the Region's Social Strategy programme using, in part, their Fire Safety Support Unit to visit various parts of the Region, both urban and rural, to promote fire prevention and fire safety advice.

146. This short summary of projects, campaigns and initiatives does not cover the full range of activities and substantial efforts which brigades make in promoting fire safety messages. In some cases brigades contribute to a multi-discipline approach, such as in the "Crucial Crew" programme, where safety scenarios are presented jointly by organisations such as the police, fire brigades, ambulance service, electricity companies and others, giving school children practical experience in assessing potentially dangerous situations. It is hoped that these and the many other endeavours will be reflected in a positive reduction in the high numbers of fires and deaths due to fire, which Scotland has experienced for some time.

## **Joint Fire Prevention Committee**

147. During the year 2 new guidance documents incorporating fire safety measures were published. The first entitled "Fire Safety in the Printing Industry" a joint publication by the Health and Safety Commission, the Home Office and The Scottish Office Home and Health Department. It is aimed primarily at managers within the industry who have responsibility for fire safety but will also be of assistance to other persons involved in fire safety generally and health and safety advisors.

148. The second document "Fairgrounds and Amusement Parks: A Code of Safe Practice" was published by the Health and Safety Executive (HSE). The Code aims to



improve fairground safety generally, electrical installations and fire safety. Although the Code does not have the force of law in the manner of an approved Code of Practice, the HSE has instructed its inspectors to take account of its contents when considering compliance with statutory requirements.

## **Fire Safety in the Workplace**

149. In my report for 1991, I indicated that regulations were being drafted under Section 12 of the Fire Precautions Act 1971 in order to implement the fire safety provisions of 2 EC Directives relating to places of work. During 1992 a consultative document was issued by the Home Office and The Scottish Office Home and Health Department seeking comments on the proposed Draft Fire Precautions (Places of Work) Regulations and the proposed Guide to these regulations.

150. In the light of the comments received, Ministers have decided that the draft regulations should be modified in order to simplify them and restrict their scope, thereby reducing the burdens that would otherwise have been imposed on businesses and the workload on fire authorities, as the enforcing agencies. The associated technical guidance will also be redrafted to stress that businesses require only to take measures which are reasonable and adequate in relation to the circumstances which apply within individual sets of premises.

151. Additional guidance will be prepared for owners of small businesses and consideration is to be given to the production of leaflets which will assist fire authorities in their response to employers who seek "goodwill" advice on the subject. The Home Office and The Scottish Office Home and Health Department will, in due course, be undertaking a further consultative exercise on the draft revisions to the legislation and guidance document. Although work on the revisions is underway, it will take some time to complete and it is unlikely that the regulations will be made before the autumn of 1993, with a likely implementation date in mid or late 1994.

## **Building Standards Advisory Committee**

152. The Building Standards Advisory Committee is appointed under Section 12 of the Building (Scotland) Act 1959, and its main task is to advise the Secretary of State on the continuing development of the Building Standards (Scotland) Regulations. The Secretary of State also has a duty to consult the Committee about the issue of class relaxations of the building standards regulations. As previously reported, a major part of the Committee's work has been its involvement in a major review of the Building Standards (Scotland) Regulations, which were introduced in 1964. Since that time there have been a number of substantial changes, both in content and in the format of the regulations, to reflect, and in some cases to anticipate, changes in the forms of construction and the materials used in buildings.

153. Parts D and E of the regulations are of particular interest to the fire service, since they relate to 'Structural Fire Precautions' and 'Means of Escape from Fire and Facilities for Fire-fighting', respectively. Further amendments to the standards in the regulations have been examined by the Building Standards Advisory Committee and these are likely to be issued for public consultation early in 1993. The general effect of the proposed amendments to the Standards concerning fire is to align them further with other United Kingdom building standards taking account of recent trends in building design.

## **National Fire Prevention Youth Quiz**

154. The National Fire Prevention Youth Quiz is an annual event sponsored by the Fire Protection Association and organised by the Chief and Assistant Chief Fire Officers' Association.

155. It is aimed at 13-16 year olds, forming teams of 4 from a wide range of youth

groups from schools, youth clubs, scouts and girl guides. The objective is to increase, in a challenging way, young people's awareness of the dangers of fire and of fire safety measures. Study material, in the form of leaflets, is issued to those participating, and each brigade holds various rounds or heats in order to produce a team to represent them at the Scottish final. The winners of this event then go on to compete at national level. This year a number of changes were introduced into the format of the Quiz with a view to improving and sharpening the presentation. The Scottish final was hosted in 1992 by Grampian Fire Brigade, with competing teams from each of the brigade areas in Scotland. The competition was won by the 5th Glenrothes Boys' Brigade team from Fife, and they later represented Scotland at the United Kingdom final held in London in October 1992 and which was won by the girls from Peterborough and St Margaret's High School, Harrow. The 5th Glenrothes Boys' Brigade of Fife team again performed well on the day and achieved fourth place in a very competitive final.



# SECTION E: TRAINING

## Scottish Fire Service Training School

156. The training of recruit firefighters for the 8 Scottish fire brigades continues to be the main function of the School and in order to meet this responsibility 3 x 16 week courses were arranged during the year to provide the initial training for 200 new entrants into the fire service. In addition, the School provided training for recruits from the Northumberland Fire and Rescue Service along with a wide range of specialist courses for both wholetime and retained personnel from brigades and, in order to maximise the use of their facilities and training expertise available there, organised a series of courses for persons outwith the fire service such as the Prison Officers and Health Board Fire Safety Officers.

157. The courses and the number of students attending these training events in 1992 were:-

Recruits` Course	200
Wholetime Leading Firefighter	40
Breathing Apparatus Instructor	30
Breathing Apparatus Maintenance	3
Specialist Legislation	28
Retained Firefighter	53
Retained Junior Officer	25
Retained Breathing Apparatus Operator	5
Retained Recruits	35
Hospital Fire Prevention (including Firecode)	128
Prison Officers Fire Prevention Course	25

158. The School continues to achieve high standards in the quality of its training, both technically in its lecture room presentations and in the practical elements of its instruction. The general standard of the premises remains satisfactory and the operational equipment provided reflects broadly that which is in use in brigades. The use of video equipment and the wide range of other instructional aids of a visual type are of benefit to both instructors and students in the presentation and understanding of the increasingly technical aspects of firefighting and fire engineering concepts.

159. The Commandant, Mr C F McManus QFSM BA MIFireE continues not only to supervise and manage the School`s activities but he also plans and develops courses necessary to meet the needs of Scottish fire brigades. Credit is due to the instructional staff not only in their commitment to the work of the School, but also for taking the opportunity to obtain the additional experience which their secondment will give to their careers in the fire service.

## Fire Service College

160. During 1992 brigade officers in Scotland continued to attend career development and specialist training courses at the Fire Service College. However, the total number of students attending courses dropped for the second year in succession, from 225 in 1991 to 212 in 1992.

161. On the aspect of progressive development training, the Watch Commander and Junior Officer Advancement Courses were most frequently attended, followed by the Specialist Fire Prevention Course. In the more specialised forms of training, Fire Investigation, Marine Firefighting, Hazardous Materials and Divisional Command Courses figured prominently among the various and widely differing courses attended at the College.

162. The College courses were restructured in 1990-91 with the removal of the Junior Officers' Course and the introduction of the Watch Commander and Junior Officers' Fire Prevention Courses. It is noted with some concern that there has been a reduction in the number of students attending the Junior Officers' Advancement Course, which could reflect some brigades' inability to fund travel, as the College allocated the total number of places which brigades had requested.

163. The costs of travel and subsistence with which Scottish fire brigades are faced in sending students to the College at Gloucestershire are substantial, and fire authorities and Firemasters are to be commended for ensuring that in spite of the current restrictions on finance, as far as possible career development and training is being maintained. The Scottish Office Home and Health Department, in turn, has continued to fund an agreed proportion of the College costs in the financial year 1993-94.

## **Brigade Training**

164. In view of the wide range of emergency situations which brigades are called upon to attend, the training of brigade personnel is necessarily multifarious, requires a considerable practical involvement and has an ongoing need to update personnel on technical detail and equipment changes. Brigade training programmes are reviewed on a regular basis in order to encompass new techniques and procedures, not only for handling emergency incidents but also to ensure the safety of brigade personnel at these incidents.

165. Last year I reported that because of the variation in the methods adopted by brigades to record the training of their personnel, whether wholetime, retained or volunteer, the Joint Training Committee of the Central Fire Brigades Advisory Council was developing a standard method of recording all aspects of brigade training. During 1992 guidance issued in the form of a "Dear Firemaster" letter (DFM 5/1992 Item C) sent to brigades, detailing the nature of the information which should be kept in personal training records and in brigade training records. The responsibilities of those keeping the records were also covered in the document, together with the need for ongoing supervision of the information and records kept.

166. The Scottish Office Home and Health Department also issued guidance on the training necessary for the operation of special appliances such as high reach appliances, fire boats and other craft, as well as for smaller items of equipment, for example lighting masts, winches and cutting and lifting gear.

167. Information about RADSIM (Radiation Survey Meter Simulator) a training aid for use in exercises depicting incidents involving radiation sources, was covered in a "Dear Firemaster" letter (DFM 1/1992 Item D). The use of the simulator could lead to the discontinuation of the use of radioactive sources for training, but a knowledge of its special characteristics is necessary to avoid a misunderstanding of the information it provides. Further research on the matter is being carried out by the Home Office Fire Research and Development Group.

168. A Technical Bulletin on explosives has been prepared by the Home Departments and was issued to brigades under cover of a "Dear Firemaster" letter (DFM 4/1992 Item F). It contains general guidance about the common properties of explosives, their uses and the regulations covering their manufacture, storage and transportation. Reference is also made in the document to operational procedures at incidents involving explosives.

169. Each of the Scottish fire brigades has continued with the presentation of courses and training for outside organisations. These range from basic firefighting courses to those having a more specialist content, such as off-shore firefighting, the wearing of



breathing apparatus, fire safety management and hazardous materials and dangerous gases. These and many others reflect the range of expertise within the Scottish Fire Service and, as well as meeting the training needs of commercial and industrial companies, the facility generates income for the fire authority.

## Fire Services Examinations Board

170. Firefighters must be successful in the examinations set by the Fire Services Examinations Board before they are eligible for promotion to a higher rank. 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 only. 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. Written examinations for Leading Firefighter, Sub-Officer and Station Officer were held in September, October and February respectively of 1992, while the practical examinations for Leading Firefighter and Sub-Officer ranks took place between March and June of the year. The number of candidates at each level sitting these examinations, together with the number of passes obtained over the past 4 years, is shown in Table G.

TABLE G - Fire Services Examinations Board Results 1989-1992

	1989			1990			1991			1992		
	No. of Candid- ates	No. of Passes	%	No. of Candid- ates	No. of Passes	%	No. of Candid- ates	No. of Passes	%	No. of Candid- ates	No. of Passes	%
<i>Written Examinations</i>												
<i>Leading</i>												
Firefighter	327	110	33.6	300	102	34.0	343	103	30.0	293	139	47.4
Sub-Officer	175	57	32.6	195	65	33.3	213	32	15.0	226	53	23.5
<i>Station Officer</i>												
Officer	179	27	15.1	170	31	18.2	152	33	21.7	151	28	18.5
<i>Practical Examinations</i>												
<i>Leading</i>												
Firefighter	139	74	53.2	169	103	60.9	155	94	60.6	134	84	62.7
Sub-Officer	75	39	52.0	95	49	51.5	100	50	50.0	85	40	47.1

171. Amendment regulations were issued on 24 November 1992 introducing a provision - similar to that already in operation on written examinations - that a candidate who applied for, but failed to attend the practical examination, without reasonable excuse, will be ineligible to take the same examination in the following year.

## Institution of Fire Engineers

172. Members of the Scottish Branch of the Institution attended a number of meetings during the year where the technical subjects covered ranged from the production and safety features associated with the manufacture of detonators and explosives, to safety at sports grounds. A visit was also made to Northern Ireland, not only to learn of the special difficulties there but also to forge links between the 2 branches.

173. Lothian and Borders Fire Brigade played host in 1992 to the visit of the President of the Institution, Mr Pat Sheen, who addressed the Branch and presented certificates to members who had been successful in passing the Institution's examinations.

174. Seven members of the Scottish Branch were successful in the 1992 examinations, with a further 12 candidates being successful in individual papers under the newly revised "Membership" examination rules.

175. The Scottish Branch look forward to a number of important events in the incoming year. In particular, 1993 will be the 75th Anniversary of the Institution, and secondly the Annual General Meeting and the Fire '93 Conference will be held in Glasgow. In addition, they will see the formation of a new Region of the Institution with the amalgamation of the Scottish, Northern Ireland and the Icelandic Branches.



# SECTION F: SUPPLIES AND SERVICES

## Transport

176. At the end of 1992 there were 392 first line pumping appliances and 92 specialist vehicles, such as turntable ladders, hydraulic platforms, emergency tenders or road rescue units, based at fire stations throughout Scotland. In addition, brigades have a wide range of ancillary vehicles - vans, lorries, personnel carriers, etc - which are necessary to provide a service to the public.

177. Vehicle replacement programmes, which are essential to ensure the maximum efficiency and cost effectiveness of the fleet, range from 10-15 years for front line appliances. However, these targets are not being met on all occasions due to limited financial resources. As the majority of brigades have their own vehicle workshops the responsibility of maintaining these older appliances in a satisfactory state of readiness is an important part of the work of the transport staff who must be fully trained in order to deal with the mechanical, electrical, hydraulic and other technical problems which can arise in vehicles used by the fire service.

178. Despite the strict maintenance and servicing schedules which are in place, breakdowns can and do occur - occasionally outwith normal working hours. Each brigade therefore has in place an around the clock emergency call-out or standby system for workshops staff. A number of brigades have purpose built and equipped workshop vehicles as part of the normal servicing programme to assist with this work.

## Premises

179. All brigades have made progress during the year in replacing or upgrading their premises. The standard of maintenance is in general satisfactory. However, for a variety of reasons, principally the financial constraints to which I have already referred, it has not been possible to carry out all the projects that had been considered necessary.

180. In Strathclyde, a replacement retained station was opened at Dalry, Ayrshire and work commenced on a new wholtime station at Kilmarnock which is due for completion by the end of 1993. Progress has also been made in the selection of a site to replace the existing North West Station in Glasgow. Given the availability of funding, work on the new station should commence in the financial year 1993-94. In Lothian and Borders a new wholtime replacement station has been opened at Bathgate and a site has been secured for the construction of a new wholtime fire station in the Newcraighall area of Edinburgh.

181. A new building has been constructed by Central Fire Brigade at their Headquarters at Maddiston. The building will provide garaging space for spare vehicles as well as the provision of accommodation for the breathing apparatus maintenance unit. In addition, a site has been acquired for the construction of a fire station/garage for the volunteer unit at Tyndrum and it is hoped that building work will commence during the financial year 1993-94. In Fife a major refurbishment of the Headquarters complex at Thornton was started during the year and should be completed by the end of 1993. A new single bay retained fire station was also opened at St Monans and the decision has been made to replace the retained fire station at Newburgh. A site has been made available for this project and planning permission is currently being sought.

182. In Tayside work has begun on the construction of a new fire control centre in close proximity to the fire station at McAlpine Road, Dundee and the construction of a new building at Perth Fire Station to house the "B" Division Headquarters staff is also proposed. Work on this building should start in 1993 if finance is available. In Highland and Islands, building work on a new fire control centre at Inverness is well advanced in a converted garage complex which will also house vehicle workshops and general stores.



183. In Dumfries and Galloway the roof of the wholetime fire station in Dumfries was replaced with a pitched roof and sites have been made available for the replacement of the existing retained stations at Whithorn and New Galloway. In Grampian a site has been identified for the replacement of the fire station and Divisional Headquarters at King Street, Aberdeen, and at Altens a new bay was added to the fire station while at Headquarters upgrading work was carried out on the smoke house and the breathing apparatus training facility. The building of a new fire station at Peterhead is due to start and should be completed in 1994.

## Equipment

184. Two Brigades, namely Strathclyde and Fife, have now adopted the Automatic Distress Signalling Unit as the standard alarm unit for all breathing apparatus (BA) wearers. Currently the majority of DSUs used by brigades are operated manually by BA wearers to signal to colleagues and control officers the fact that they are in difficulty. The new ADSUs are designed to operate automatically in the event of the BA wearer becoming immobilised, or trapped in such a way as to render them unable to alert colleagues or trigger the alarm manually. Current advice to brigades recommends that the new automatic unit should be phased into service as the older types require to be replaced.

185. Several brigades have now purchased chemical suits which can be worn over breathing apparatus sets. This suit, known as a coverall suit, ensures that the wearer and their equipment are fully protected from the surrounding hostile environment in which they are working. After use the subsequent decontamination process is simpler by virtue of the fact that only the outer surface has been exposed to the hazardous atmosphere.

186. All brigades have been increasing their resources of hydraulically powered rescue tools which are used primarily in the extrication of persons from vehicles involved in road crashes. During the operation of this equipment protective clothing must be worn. A wide range of goggles, gloves, aprons and face shields is available in brigades for this purpose.

187. Lothian and Borders and Tayside Brigades have replaced their breathing apparatus sets with newer up-dated models. Changes of this type must be introduced on a phased basis to allow for training on the technical features and practical use of the replacement sets and also to permit the brigade's BA maintenance engineers to stock new parts and modify servicing arrangements.

188. In order to satisfy the principles relating to the safety of personnel which are incorporated within the Control of Substances Hazardous to Health Regulations 1988 (the COSHH Regulations) both Strathclyde and Highland and Islands Fire Brigades have equipped a number of their volunteer units with sets of breathing apparatus. Prior to 1992 volunteer units had not been provided with this form of protection.

189. In these circumstances it has been necessary for each Brigade to instigate a substantial training programme for volunteer personnel covering both the technical and practical aspects associated with the use of BA. This training is being given by wholetime BA instructors. In the Highland and Islands Fire Brigade some units have been chosen as part of a pilot study to evaluate the future needs of the remainder of the volunteer units. The additional capital allocations for the fire service in Scotland, which were announced by the Rt Hon The Lord Fraser of Carmyllie QC on 4 December 1992, included additional funding of £0.7 million for Strathclyde and Highland and Islands which was expected to assist those fire authorities in this matter.

190. Most brigades are in the process of increasing the number of fireground radios carried on each fire appliance, to improve the system of communication between firefighters and officers in the command and control at incidents. Advice has been issued to the Service to the effect that fireground radios which may be used in a potentially flammable or explosive atmosphere should be of a type which is intrinsically safe.



## **Uniform**

191. As a result of the EC Directive on Personal Protective Equipment (Council Directive 89/686/EEC) the Department of Trade and Industry published a consultation document in the latter half of 1992 containing draft regulations for the United Kingdom, to implement the provisions of the Directive. As the application of the Directive and the draft regulations extend well beyond the limited sphere of protective equipment used by the fire service, the consultation process was inevitably extensive and to date the regulations have not been finalised.

192. The provision of personal protective equipment is not new to the fire service, as it has always been a major priority of brigades to ensure the safety of brigade personnel in the wide range of activities with which the service become involved. In this regard brigades continue to evaluate a variety of personal protective equipment items such as fire tunics, fire boots, helmets and protective gloves. These trials and testing operations are just as much part of the ongoing activities of the brigades as the evaluation of equipment to be used for firefighting or rescue purposes.

## **Telecommunications**

193. The Scottish Office Directorate of Telecommunications continued to support the communications activities of the Scottish fire brigades during the year, with radio spectrum management activities being directed mainly towards the evolution of existing brigade systems, in order to give improved coverage, and to rectify interference problems.

194. A major review of Scottish Fire and Police Services' communications was commissioned by the Directorate, with all brigades contributing to the formation of an agreed "fire service user requirement". The key issues identified are now being taken forward, in conjunction with the Home Office review for England and Wales, with the intention of developing a strategy for the procurement of the next generation of digital emergency services' communications systems.

195. Three Scottish brigades, Tayside, Fife and Highland and Islands, are at present involved in the development of new control centres. In each case decisions have still to be made with regard to the type of equipment which will be used, although it is expected that each fire control centre will become operational in financial year 1993-94.

# SECTION G: MISCELLANEOUS

## Scottish Central Fire Brigades Advisory Council

196. As usual, the Council met twice during 1992. The June and December meetings were chaired by Mr J Hamill, Secretary, The Scottish Office Home and Health Department. In addition, a special meeting of the Council, chaired by Mr D Essery, Under Secretary, was held in February to consider developments in the fire service in Scotland relating to the Control of Substances Hazardous to Health Regulations 1988.

197. The Council considered reports from the Joint Pensions Committee, the Joint Committee on Fire Brigade Operations, the Joint Fire Prevention Committee - together with a report on Scottish fire prevention publicity activities, the Joint Committee on Fire Brigade Communications, the Joint Committee on Appliances, Equipment and Uniform, the Joint Training Committee, the Joint Committee on Special Appliances and the Joint Committee on Fire Research. There was opportunity for a full discussion of items summarised in the reports, and for explanations to be given by a member of each Committee of the work carried out during the year.

198. At the June meeting the Commandant of the Scottish Fire Service Training School presented a report on the work of the School during the 12 month period to 31 March 1992.

## Joint Committee on Fire Brigade Operations

199. This Committee oversees the work of several technical subgroups and working parties which deal with operational matters affecting the fire service in general. Its deliberations and findings are passed to the Home Office and The Scottish Office Home and Health Department for consideration and publication as guidance and technical bulletins for the fire service.

200. During the year a number of guidance documents were issued in the form of "Dear Firemaster" letters and Fire Service Circulars, and among the subjects covered were the following.

- i. The employment on operational duties of pregnant firefighters. This gave guidance to fire brigades on the protection of the unborn child of female firefighters.
- ii. The RADSIM radiation survey meter simulator - a device which can dispense with the use of radioactive sources in training exercises. Further developmental work is continuing at this time.
- iii. Safety hazards associated with carbon fibre materials. The document gave guidance on the protection necessary for firefighters at incidents involving crashed aircraft.
- iv. Hazchem list No. 7, which refers to emergency action codes and gives supplementary information for dealing with incidents involving dangerous substances conveyed in bulk by road.
- v. The United Kingdom Fire Service Search and Rescue Team. This document outlines the arrangements for future responses to national and international disaster relief where the expertise of such a team would be of substantial assistance.

201. During 1992 there were 8 documents issued to brigades containing guidance on 45 technical matters affecting the operational work of the Service.

202. Other matters within the remit of this Committee, but handled by the Technical Groups, are:-



- i. dealing with rope rescue procedures and equipment;
- ii. firefighting in tunnels and similar structures, where this Group has reported and it is expected that a Technical Bulletin will be produced next year;
- iii. breathing apparatus, with subgroups on data requirements and telemetry;
- iv. incidents involving radioactivity, where the Group has also completed its work and a Technical Bulletin is awaited; and
- v. firefighting at sea - on which guidance is expected shortly.

## **Joint Training Committee**

203. Two of the Working Parties operated by this Committee completed their briefs during the year namely: the Drill Book Review Sub Committee and the First Aid and Casualty Handling Group.

204. The Drill Book, which will be re-titled the "Fire Service Training Manual", was passed to the publishers at the latter part of the year and it is expected to become available to the Service in the Spring of 1993.

205. Guidance on First Aid and Casualty Handling requirements for the Service will be issued to brigades in the form of a Departmental Circular, which will include advice on the formulation of courses for both trainees and instructional staff. The package is designed to satisfy the Health and Safety standards outlined in the Health and Safety Executive's "Approved Code of Practice for First Aid at Work".

206. Discussions continue on the subject of revised training requirements for Control Room staff and a further Subgroup is considering the issue of Guidance on Realistic Training. This latter group will endeavour to produce guidelines on how to introduce more realism into fire service exercises at fire stations and at off-station locations while still maintaining current safety standards for the personnel involved.

207. The Ability Range Tests (ART), to which entrants to the fire service are subjected, are at present being reviewed by a firm of consultants in order to produce a series of tests more suited to fire service needs. It is considered that the current ART procedures may discriminate against female and ethnic minority applicants. Limited field trials have been carried out by the consultants in selected brigades and the results of these trials are currently being evaluated. It is expected that the review will continue for at least another year.

208. In October of 1992 a Symposium on Fire Service Training was held at the Fire Service College, Moreton-in-Marsh. Those attending included members of the organisations represented on the Joint Training Committee, together with guests invited from other organisations with a fire service training interest. A Training Strategy Group, under the Chairmanship of Mr Brian Fuller, Commandant Chief Executive of the College, has been formed with a remit to discuss the future training needs and requirements of the Service. The Training Strategy Group will report developments through the Joint Training Committee.

## **Joint Committee on Appliances, Equipment and Uniform**

209. The Technical Sub Group of the main Committee is heavily involved in discussions on the subject of the use of telemetry in Breathing Apparatus Communication Systems. As part of their deliberations the Sub Group will also consider the design of an electronic device which would simulate the evacuation signal at present given by the ACME Thunderer whistle. Since personnel wearing breathing apparatus cannot use the whistle, it is hoped that the electronically operated simulator will fulfil this need.



210. A research project to examine the general effectiveness of electronic sirens, as opposed to 2 tone horns, on fire appliances is nearing completion. In view of the current traffic congestion problems in towns and cities it was considered necessary to evaluate alternative methods of warning other road users of the approach of a fire appliance travelling to an emergency incident. The results of the research will eventually be put to the Service in the form of a Joint Committee for Design and Development (JCDD) Specification.

211. The Institution of Occupational Medicine has been awarded a contract to carry out research into the use of anti-flash hoods and similar forms of face protection for firefighters. It is estimated that this project will run for approximately 2 years.

212. The Joint Committee is closely monitoring the European Directive relating to the recommendations and requirements for Personal Protective Equipment (PPE) and its application to the fire service. Although the Directive has been issued it will not become law in the United Kingdom until appropriate regulations have been finalised by the Department of Trade and Industry. There will be a transitional period during which current issues of PPE, complying with relevant British Standards, will continue to be able to be used by the fire brigades. Once the regulations implementing the provisions of the EC Directive have been introduced, new equipment purchased from the date of commencement will be required to comply with the regulations.

213. The Home Office Fire Research and Development Group has issued a series of Research Reports on such subjects as Vehicle Rescue Tools, Security-Door Opening Devices, Additives to Water and the Use of Foam on Large Scale Oil Fires. In addition a video, covering these and other subjects, has been produced and made available to the Service for use as a training aid and for evaluation purposes.

214. Further work by the Technical Sub Committee has commenced on the standard tests applied to fire service equipment. At present each item of equipment carried on a fire appliance is tested in accordance with guidance contained in the Fire Service Drill Book or as detailed in the manufacturers' instructions. It is considered that the test methods, and the frequency of application warrant review, and it is intended that the outcome of the Sub Committee's deliberations will be put to the Service as an annex to the newly updated Fire Service Training Manual.

## **Joint Committee on Fire Brigade Communications**

215. The consultants' report on the "Major Review of Radio Communications", together with the study into "Replacement Mobilising and Communications Systems" have been completed and passed to the Joint Communications Committee for further deliberation. The Home Office is also studying the reports and it is hoped that recommendations on the way forward will be produced in due course.

216. Since, as stated in my 1991 report, the 2 projects mentioned above were designed to examine the future needs of the fire service in England and Wales, The Scottish Office Directorate of Telecommunications commissioned a consultant to look at the needs of Scottish fire brigades in this respect. The report on the Scottish communications systems was finalised at the end of 1992 and is now under consideration. As well as producing a blueprint for the future developments of fire service and police communication needs, the Directorate will be monitoring the effect which any changes in England and Wales will have on the Scottish emergency services.

217. A "Memorandum of Understanding" relating to Cellular radio users and a British Telecom "Code of Practice for the Emergency Services" were produced and issued to fire brigades during the year. Both documents will assist each Service in their discussions with those undertakings providing communication facilities between the public and the emergency service control centres.

218. Advice has been issued to the fire service regarding the provision of radio communications between the local authority fire brigade and other fire services, such as the Ministry of Defence, Works Fire Brigades and Airport Fire Brigades. At the end of the year discussions between brigades and these outside organisations were



continuing, with The Scottish Office Directorate of Telecommunications available to advise where necessary.

## Joint Committee on Fire Research

219. The Committee met twice during the year and considered various fire related projects, as set out in the Strategic Plan for Fire Research. The work of the Fire Research and Development Group is divided into 4 main categories - fire prevention and protection; firefighting equipment; fire service support; and other support. At present there are some 37 fire related studies being undertaken within the Strategic Plan. During the year the Committee considered 10 Summary Reports, brief details of some of which are given below.

220. The fires started by the retreating Iraqi forces in the Kuwait oil fields during the Gulf War were some of the largest ever seen, and while the well-head fires were of interest to the fire service in the United Kingdom, there were a number of severe, unchecked fires started in tank farms and refineries from which many lessons could be learned. At the time of the investigation most of these fires had burned out, but it was nonetheless considered that much useful information could be obtained about the unchecked spread of such fires at these installations and which could ultimately lead to improvements in British fire safety regulations and firefighting techniques. The study highlighted the need for firefighters, plant operators, contractors and customers to be involved in the planning, design, installation and acceptance phases of tank farm construction, so that previous firefighting experience could be taken into consideration. A list of areas which might benefit from further research was included in the report. However, these were beyond the scope of the current Fire Research Strategy. Nevertheless, the presentational video outlining the research had been shown to the Petroleum Industries Association in the course of joint discussions and the Association is awaiting formal receipt of the Summary Report and video which it proposes to copy widely to its members.

221. As a result of public concern, a series of tests were undertaken in 1989 to evaluate the performance of portable foam extinguishers on fires of various leaded and unleaded petrol formulations. The tests revealed that there appeared to be no need to change fire extinguisher requirements for garage forecourts or comparable situations. However, the research report suggested that large-scale trials would be required to determine whether the stability of the foam blanket could be reduced by the presence of higher levels of oxygenates. It was, therefore, decided to conduct a series of tests using unleaded petrol formulations conforming to current standards to establish whether or not such fires could be dealt with using standard low expansion foam equipment and application techniques. The trials showed that provided brigades followed the guidance issued, no additional problems would be expected when using good quality foam against the petrol formulations permitted by current and foreseeable future standards.

222. In the event of a fire in an atrium building such as a shopping precinct, smoke is a major threat to life safety. In order to reduce this risk, control measures are required as part of the fire safety system to remove smoke from the area affected and allow fresh air to replace it. Air is effectively sucked into the building through available openings, including the emergency exits, and it can attain relatively high velocities at the apertures through which it passes. Concern had been expressed that the existing guidance was inadequate and it was, therefore, decided that a systematic study should be undertaken in order to identify the air velocities which are acceptable and would not put people at risk. The results of this project were discussed with the Building Research Establishment and it was agreed that current guidance should be updated and an amendment made to the relevant British Standards.

223. The Unit of Fire Safety Engineering at Edinburgh University was commissioned to evaluate a number of representative fire models which aim to show how fires will behave in different forms of construction and in complex buildings. The project was undertaken since in recent years there had been an increase in the development of computer-based models for use in fire-risk analysis. The purpose of such models is to



improve and amplify the assessment of fire risks in particular types of building design, together with the contents and the occupants. The intention is that they should provide useful data in estimating the likely effects of making a change to a fire safety system within a building (whether new or existing). There are, however, dangers if a computer model is unreliable or is used in an inappropriate manner. The project was undertaken, therefore, to ensure that the fire service is provided with current information about the validity and reliability of computer fire models and to assist in the formulation of standards for the quality control of such models. The study established that the assessment of a fire model is, in general, a complex matter. It is not just the characteristics of a model that are important but how the model is to be used and what significance is to be attached to the information that is provided. In other words, the context in which the model is used also needs to be considered. The study concluded that the comparison of a single run of a computer-based model with a single set of experimental results would be of limited value. Furthermore, a good correspondence between theory and experiment in such a case did not necessarily mean that the model was good. The report suggested that, if and when modelling studies are presented to brigades in support of building proposals, they should be examined critically bearing in mind the limitations of the model. As a general rule, the results from fire models should not be taken to be quantitatively accurate. Quantitative results should be considered with great caution, and used only in a supportive role with other knowledge, information and experience. As there are likely to be significant developments in the area of computer modelling the report recommended that the matter should be kept under review and that there should be close liaison between the fire service and Building Control Departments on future requirements, as further work in this area is essential.

## **Other Joint Committees**

224. For comments on the activities of the Joint Committee on Equal Opportunities see paragraphs 68 and 69, of the Joint Fire Prevention Committee see paragraphs 147 and 148 and of the Joint Pensions Committee see paragraph 67.

## **Civil Defence and Emergency Planning**

225. For war planning purposes, Scotland is divided into 2 zones, each co-ordinated by a Zone Fire Commander (Designate) who is of Firemaster rank, supported by a Regional Staff Officer. Each brigade also has a Brigade Emergency Planning Staff Officer (BEPSTO) who is responsible to his Firemaster for the preparation and updating of the brigade's Civil Defence and other Emergency Plans.

226. All Scottish brigades have developed their plans to an advanced stage and are 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.

227. During 1992 the fire service staged an emergency war planning exercise (Exercise Brightspark) at the Emergency Planning College, Easingwold. Seven personnel from 6 Scottish brigades were present at the exercise, which was designed to test and evaluate the fire service response to wartime situations.

228. Fire brigade personnel also participated in many local exercises in Scotland held under the auspices of local authorities, Control of Industrial Major Accident Hazards (CIMAH), site operators and others. There was also an Emergency Planning Seminar (Celsius III) held at Inverurie in December 1992. This was attended by local authority and central Government personnel. Firemaster Marr of Tayside was a member of the steering group which designed the seminar.

## **FINDS**

229. The Fire Information National Data Service (FINDS) is a computer network linking all United Kingdom Fire Brigades, the Fire Service College and the Fire Inspectorates.



The system - administered by the Chief and Assistant Chief Fire Officers' Association (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 CACFOA's Headquarters, Tamworth.

230. FINDS has been designed specifically to meet the unique requirements of the fire service, and the electronic mail facility allows the free flow of information between brigades and the data base.

231. The new FINDS system became active in 1992 thus facilitating better use of the network for inter-brigade enquiries. It also offers a greater library of centrally held information.

## **Fire Services National Benevolent Fund**

232. Contributions to the Fund from Scottish brigades in 1992 amounted to £154,238. This figure was a 10.5% fall from the sum raised in the previous year and reflects the difficulties which all charities are having at this time. Expenditure rose during the year to £69,241 with the Fund providing assistance in many cases of hardship - often involving widows and orphans - and also providing educational grants. On a United Kingdom basis, the preliminary figure of income in 1992 was £2,240,000, a decrease of approximately 0.5% from the level of 1991.

233. The excellent work of the Benevolent Fund's organisers at brigade level continued during 1992 not only in arranging fund raising activities and assisting those in special need but also in gathering together volunteer work parties to visit the Fund's properties and carry out minor maintenance operations. I therefore wish to record my appreciation for the work and efforts made by the brigade representatives of the Fund and all those who contribute their time and energy to this worthy cause.

234. A reception to mark the 50th Anniversary of the Fund is to be held in the Guildhall, London in mid-1993, and it is hoped that Her Majesty The Queen, as Patron, will be able to attend. In Scotland the Anniversary will be celebrated at a function to be held in Stirling Castle, probably in August 1993.

## **Competitions**

235. As in previous years CACFOA organised a series of national competitions for members of fire brigades to test the participants' knowledge and skills in the subjects of fire technology and first aid. Qualifying rounds are held within brigades with the winners progressing to District or National (UK) finals. This year the National Final of the First Aid Competition, which is open to Wholetime, Retained and Control personnel was held in June at the Fire Service College and in the presence of Her Royal Highness, The Princess Royal. Strathclyde Fire Brigade provided the Scottish representation at the National Final with Station Officer Davidson and Firefighter Ruth competing in the Men's Competition; and Leading Firefighter McLure and Firefighter Grimes in the Open Competition.

236. The Men's Competition was won by the team from Staffordshire, with the Scottish team performing with great credit to finish in second place. In the Open Competition the winning team was from Norfolk; the team representing Scotland again doing well to achieve fourth place.

237. I wish to highlight the fact that teams from Strathclyde have represented Scotland in the finals of each of these competitions for the past 12 years. I therefore congratulate the teams on their performance in 1992 and the Brigade for maintaining, over that lengthy period of time, the high standard necessary in order to provide the Scottish representation for the National Finals.

238. The Fire Service Technical Quiz, although held on an annual basis, is open in alternate years to teams from the wholetime and retained sections of brigades respectively. The Quiz, which is funded by the Fire Service Research and Training Trust,

is designed to encourage friendly competition between brigades, engender team spirit, and encourage an acquisition of technical knowledge in relation to the work of the operational firefighter. In 1992 the Quiz was for wholetime personnel competing in local heats before moving forward to the Scottish Final, which was, this year, hosted by Tayside Fire Brigade. Teams from 5 of the 8 Scottish brigades took part in the competition, with the winner being the team from the Dumfries and Galloway Fire Brigade. This team later represented Scotland at the National Semi-final where, unfortunately, they were eliminated.

## **Fire Services Sports and Athletics Association**

239. Since the inception of the Fire Services Sports and Athletics Association the participation of members and the commitment of the various fire brigade organisers has ensured the continuation of interest in sporting and athletic pursuits in the British Fire Service. Scottish anglers, apart from competing in events in Central, Fife and Tayside Regions, also entered for competitions held in Tyne and Wear, West Midlands, Oxford and Northern Ireland, recording several wins in the process. The highlight of the year occurred at Weymouth, where the Scots lifted the British Championships at individual, pairs and team level.

240. The Athletics section, consisting of runners from 7 brigades, participated in events at both local and national venues with the Strathclyde team winning the individual award at a European meeting held in Amsterdam and Scotland gaining the overall team event. Similar success almost followed at a venue in Germany, with Strathclyde again leading the field but the Scottish team had to settle for 2nd place overall. Teams from south of the border carried off most of the trophies from the 22nd Annual Track and Field Championships hosted in Glasgow by Strathclyde Fire Brigade's sports section.

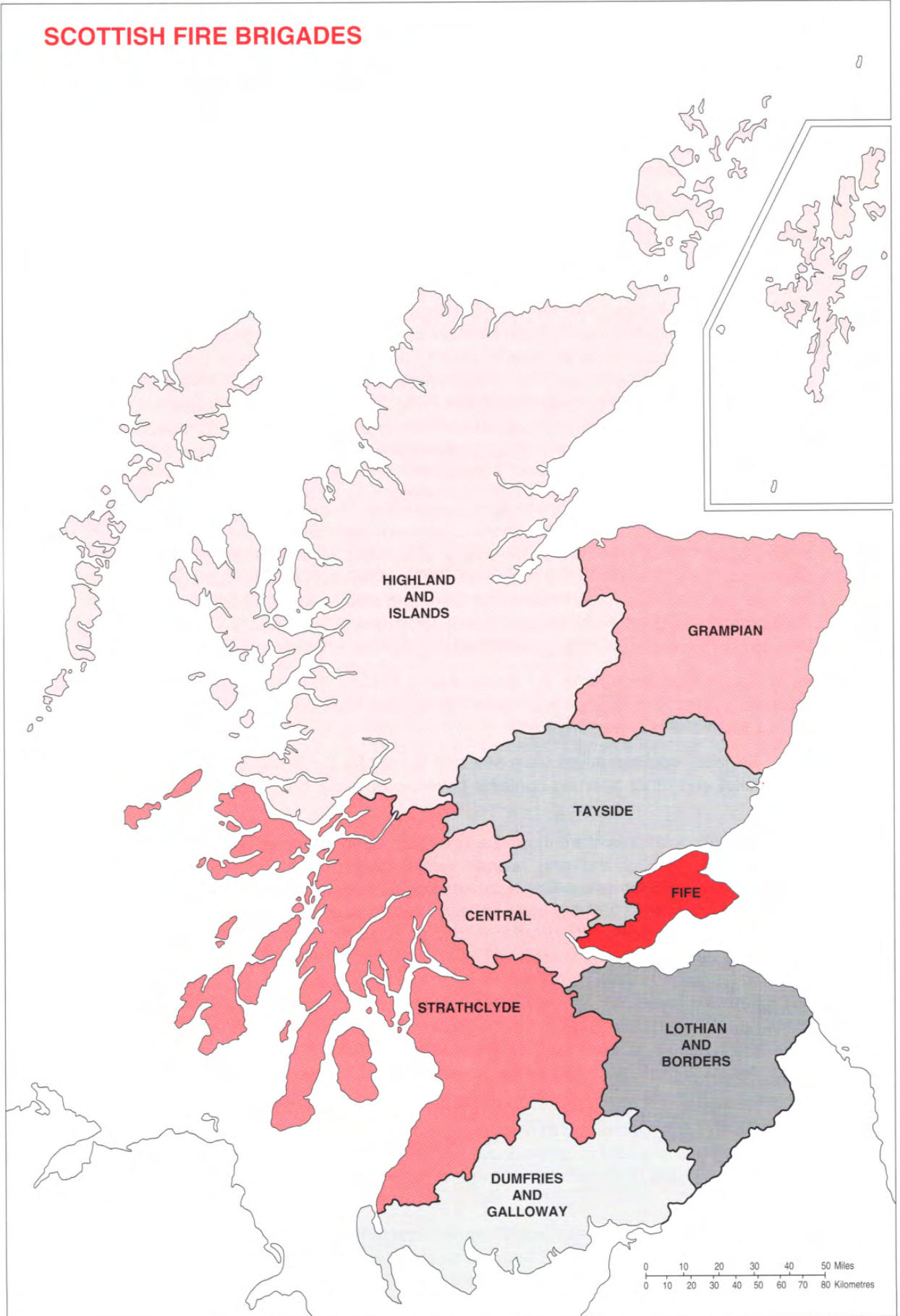
241. Strathclyde also came out winners in a football match against a team from Northern Ireland, but revenge was gained when they were outgunned by the Northern Ireland team at a clay pigeon shoot.

242. Brigade representatives were selected to play for the British teams at volleyball and cricket and other sporting contests covering bowling, golf, 5-a-side football and curling.

243. The Association's Meritorious Service Decoration was awarded to Firemaster D Grant QFSM, of Highland and Islands Fire Brigade, for his contributions to the Association over many years. Mr Grant has been Chairman of the Scottish Branch of the Association since 1987 and has served on the National Executive Committee since 1981.



# SCOTTISH FIRE BRIGADES



## Central Fire Brigade

Total Number of Emergency Incidents Attended: 4,153

Area: 263,609 hectares Population: 272,100 Population per hectare: 1.0

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

Operational Fleet: 26 Pumping Appliances, one Aerial Appliance and 5 Special Appliances.

## Dumfries and Galloway Fire Brigade

Total Number of Emergency Incidents Attended: 2,166

Area: 637,006 hectares Population: 148,400 Population per hectare: 0.2

One Wholetime Station, 15 Retained Stations and 2 Volunteer Units.

Operational Fleet: 21 Pumping Appliances, one Aerial Appliance, 2 Emergency Tenders and 3 Special Appliances.

## Fife Fire and Rescue Service

Total Number of Emergency Incidents Attended: 6,496

Area: 130,006 hectares Population: 345,900 Population per hectare: 2.7

6 Wholetime and 8 Retained Stations.

Operational Fleet: 21 Pumping Appliances, 2 Aerial Appliances, 2 Emergency Tenders and one Special Appliance.

## Grampian Fire Brigade

Total Number of Emergency Incidents Attended: 7,403

Area: 870,000 hectares Population: 506,100 Population per hectare: 0.6

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

Operational Fleet: 55 Pumping Appliances, 3 Aerial Appliances, 3 Rescue Tenders and 6 Special Appliances.

## Highland and Islands Fire Brigade

Total Number of Emergency Incidents Attended: 4,914

Area: 3,069,200 hectares Population: 276,800 Population per hectare: 0.1

One Wholetime Station, 28 Retained Stations and 98 Volunteer Units.

Operational Fleet: 88 Pumping Appliances, one Aerial Appliance, one Emergency Tender and 3 Special Appliances.



## Lothian and Borders Fire Brigade

Total Number of Emergency Incidents Attended: 16,777

Area: 642,531 hectares Population: 853,100 Population per hectare: 1.3  
13 Wholetime and 22 Retained Stations.

Operational Fleet: 47 Pumping Appliances, 6 Aerial Appliances, 3 Rescue Tenders and one Special Appliance.

## Strathclyde Fire Brigade

Total Number of Emergency Incidents Attended: 62,396

Area: 1,386,127 hectares Population: 2,306,000 Population per hectare: 1.7  
38 Wholetime Stations, 44 Retained Stations and 31 Volunteer Units.

Operational Fleet: 132 Pumping Appliances, 11 Aerial Appliances, 9 Rescue Tenders and 5 Special Appliances.

## Tayside Fire Brigade

Total Number of Emergency Incidents Attended: 8,797

Area: 750,104 hectares Population: 394,000 Population per hectare: 0.5  
6 Wholetime Stations, 15 Retained Stations and 4 Volunteer Units.

Operational Fleet: 38 Pumping Appliances, 3 Aerial Appliances, 6 Rescue/ Emergency Tenders and 4 Special Appliances.

### Footnote:

Pumping Appliance -	General fire-fighting appliance with water carrying and pumping facilities
Aerial Appliance -	Turntable ladder or 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.







**SUMMARY OF FIRES AND SPECIAL SERVICES WHICH HAVE OCCURRED IN 1992**

Fire Brigade	Total Fires	Classification of fires by number of pumps used for firefighting purposes:						Chimney Fires	Secondary Fires	False Alarms			Special Services	Totals
		(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	817	706	82	24	5			358	736	795	626	567	254	4,153
Dumfries & Galloway	484	425	44	15				557	223	308	118	255	221	2,166
Fife	1,217	1,172	29	16				631	1,523	1,058	519	1,108	440	6,496
Grampian	1,527	1,328	113	83	3			1,149	1,157	1,555	657	616	742	7,403
Highland & Islands	741	619	115	6	1			1,818	638	809	203	347	358	4,914
Lothian & Borders	3,891	2,552	623	711	4	1		899	3,210	4,240	1,319	2,107	1,111	16,777
Strathclyde	11,171	10,089	901	162	19			1,790	13,221	10,637	5,378	16,349	3,850	62,396
Tayside	1,895	1,694	186	14	1			565	2,572	1,504	539	1,136	586	8,797
<b>Totals</b>	<b>21,743</b>	<b>18,585</b>	<b>2,093</b>	<b>1,031</b>	<b>33</b>	<b>1</b>	<b>7,767</b>	<b>23,280</b>	<b>20,906</b>	<b>9,359</b>	<b>22,485</b>	<b>7,562</b>	<b>113,102</b>	



## MAJOR FIRES 1992

### REQUIRING AN ATTENDANCE OF 6 OR MORE PUMPING APPLIANCES

Date	Address	Type	Brigade
<b>January</b>			
7	Windmill Street, Peterhead	Warehouse	Grampian
14	Stoneyholm Road, Kilbirnie	Factory	Strathclyde
17	Maxwell Road/Barrhead Street, Glasgow	Vehicle Pound	Strathclyde
23	Duchess Place, Cambuslang	Factory	Strathclyde
28	Moffat/Selkirk Road, Yarrow	Forest	Lothian and Borders
30	Ingram Street, Glasgow	Public House	Strathclyde
<b>February</b>			
10	Southside Road, Grangemouth	Scaffolding	Central
11	Newton, Elgin	House	Grampian
<b>March</b>			
15	Sauchiehall Street, Glasgow	Restaurant	Strathclyde
15	Gairloch Road, Port Glasgow	Factory	Strathclyde
31	Crosbie Road, Troon	House	Strathclyde
<b>April</b>			
5	Renfield Street, Glasgow	Flats and Offices	Strathclyde
<b>May</b>			
1	Nitshill Road, Glasgow	Factory	Strathclyde
4	Gartochar Road, Glasgow	Factory	Strathclyde
18	Victoria Road, Glasgow	Garage	Strathclyde
21	Queens Gate, Inverness	Hotel and Shops	Highland and Islands
25	Leverndale Hospital, Glasgow	Derelict Building	Strathclyde

**June**

20	Carlisle Road, Crawford	Timber Yard	Strathclyde
21	South Middlerigg Farm, California	Forest	Central
24	Muirwood, Limerigg	Forest	Central
25	Nicholson Square, Edinburgh	Shop and Flats	Lothian and Borders

**July**

14	Station Road, Cowie	Timber Yard	Central
19	Motherwell Street, Airdrie	Offices	Strathclyde
22	Brown Street, Glasgow	Leisure Centre	Strathclyde

**August**

1	BP Chemicals, Grangemouth	Industrial Premises	Central
18	Primrose Street, Glasgow	School	Strathclyde
31	Renfield Street, Glasgow	Shops and Offices	Strathclyde

**October**

6	Prestwick Airport	Airplane Crash	Strathclyde
10	Whitehall Crescent, Dundee	Hotel	Tayside
18	Tower Dyke Side, Hawick	Dancehall	Lothian and Borders
24	East Mains Industrial Estate, Broxburn	Factory	Lothian and Borders
25	Ferryhill North, Aberdeen	Church	Grampian

**December**

20	High Street, Edinburgh	Hotel	Lothian and Borders
26	Muir Street, Motherwell	Church	Strathclyde



**FATALITIES AT FIRE INCIDENTS ATTENDED BY BRIGADES DURING 1992**

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	Commercial Premises	Place of Public Entertainment	Outside Area	Miscellaneous*	TOTAL	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL		
Central			3	1	2	2	8	2	3							2	1					8	1	1	1		1										8
Dumfries & Galloway				1	1	1	3	2	1													3	1	1				1									3
Fife	2		3	2	1	3	11	9	1	1												11	4	2	2	1							1	1	1	11	
Grampian	3		3	3	2	2	13	7		3		1			1	1					13	1	1	1	1	5	1		2	1				2	13		
Highland & Islands	1		4	1	1	3	10	7						1	1	1					10	3	1	1	1	2						1	1	1	10		
Lothian & Borders		1	4	4	3	1	13	1	7	1					2					1	13	1	2	1	1	4	3							1	13		
Strathclyde	2	1	7	14	17	12	53	16	20	9	1		2			4	1				53	4	4	10	5	4	4	2	2	2	3	2	4	9	53		
Tayside			3	3	1	1	8	2	2			1		1		2	1				8		1		2			1				2	2	8			
<b>Totals</b>	<b>8</b>	<b>2</b>	<b>27</b>	<b>29</b>	<b>28</b>	<b>25</b>	<b>119</b>	<b>46</b>	<b>34</b>	<b>13</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>119</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>10</b>	<b>17</b>	<b>8</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>3</b>	<b>8</b>	<b>16</b>	<b>119</b>				

\*1. Derelict House  
 2. Tent used as Dwelling  
 3. Garden of House















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