HOME OFFICE
AND
SCOTTISH HOME AND HEALTH DEPARTMENT

REPORT OF THE DEPARTMENTAL COMMITTEE ON THE FIRE SERVICE

CHAIRMAN: SIR RONALD HOLROYD

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Presented to Parliament by the Secretary of State for the Home Department and the Secretary of State for Scotland by Command of Her Majesty

May 1970

LONDON
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WARRANTS OF APPOINTMENT

WE HEREBY APPOINT:—

Sir Ronald Holroyd

Sir Harold Banwell

Mr. P. H. P. Bennett

* Miss A. Crichton

Mr. L. Dobson

† Mr. A. E. Griffiths

Professor N. C. Hunt

Dr. J. W. Macfarlane

Mr. T. G. Randall, C.B.E.

‡ Dr. A. J. Richmond

Col. G. P. Shakerley, C.B.E., M.C., T.D.

to be a Committee to inquire into, and make recommendations on:—

(*a*) the principles which should govern the organisation of the fire service in Great Britain;

(*b*) the relationship between the central Government and local fire authorities; the functions of the fire service; measures for maintaining its efficiency; the arrangements for recruiting and training its members and ensuring that the best use is made of the manpower available; and the machinery for determining pay and conditions of service;

(*c*) the need for further fire prevention measures;

(*d*) fire research and the application of its results.

AND WE FURTHER APPOINT Sir Ronald Holroyd to be Chairman and Mr. H. V. H. Marks of the Home Office, and Mr. F. J. Reilly of the Scottish Home and Health Department, to be Secretary and Assistant Secretary respectively of the Committee.

R. JENKINS.

W. ROSS

Whitehall, S.W.1.

2nd February, 1967.

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* Now Dr. A. Crichton.
† Resigned March, 1968.
‡ Now Sir Alan Richmond.

WE HEREBY APPOINT Mr. J. Crawford in the place of Mr. A. E. Griffiths to be a member of the Committee appointed on 2nd February, 1967, to inquire into the principles which should govern the organisation of the fire service in Great Britain and into other matters relating thereto.

J. CALLAGHAN.

W. ROSS.

Whitehall, S.W.1.

18th June, 1968.

[redacted]

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FUTURE FIRE PREVENTION LEGISLATION

CHAPTER XV

TECHNICAL DEVELOPMENTS

REPORT OF THE DEPARTMENTAL COMMITTEE ON THE FIRE SERVICE

To the RIGHT HONOURABLE JAMES CALLAGHAN, M.P., Her Majesty's Secretary of State for the Home Department, and to the RIGHT HONOURABLE WILLIAM ROSS, M.B.E., M.P., Her Majesty's Secretary of State for Scotland.

GENTLEMEN,

1. We were appointed on 2nd February, 1967, with the following terms of reference:—

". . . to inquire into, and make recommendations on:—

(*a*) the principles which should govern the organisation of the fire service in Great Britain;

(*b*) the relationship between the central Government and local fire authorities; the functions of the fire service; measures for maintaining its efficiency; the arrangements for recruiting and training its members and ensuring that the best use is made of the manpower available; and the machinery for determining pay and conditions of service;

(c) the need for further fire prevention measures;

(*d*) fire research and the application of its results."

2. We wished from the outset to have the views of all organisations and persons interested in the problems of fire. Accordingly our first step was to call for written evidence, and we issued a general invitation in the press and specific invitations to certain government departments, organisations and associations concerned with these matters. By June, 1967, sufficient evidence had been received for the Committee to start detailed work. A list of those who submitted written evidence and of organisations and individuals from whom we took oral evidence is in Appendix H. During the course of our inquiry we held 70 meetings, some of which extended over two or three days. We also visited 18 fire brigades in Great Britain, including four in Scotland and four in Wales, the Fire Research Station, the Fire Service Staff and Technical Colleges, and the Scottish Fire Service Training School. During the course of our visits to brigades we saw a number of fire service recruit training schools, including the London Fire Brigade Training College for Junior Firemen at Swanley. Four of our members also visited Switzerland and Germany and three visited the United States of America and Japan with a view to examining at first hand the arrangements for dealing with the problems of fire in other technologically advanced countries. Our main impressions of these visits are set out in Appendix A. We wish to thank all those organisations and persons who gave evidence to us and the many who willingly supplied additional information at our request. We also wish to thank all those who received us on our visits and for the hospitality which they afforded us.

3. When the Committee was appointed we were invited to make known as soon as possible to the Royal Commissions on Local Government in England and in Scotland our views on the principles which should govern the organisation of the fire service. This presented us with some difficulty because firm conclusions, even on general principles of organisation, could hardly be reached until evidence covering our full terms of reference had been taken and considered, and we had had an opportunity of examining the service on the ground by the series of visits to which we have referred in paragraph 2 above. Nevertheless, during the first part of our inquiry we concentrated our attention on this subject and subsequently conveyed our preliminary views on organisation to the Royal Commissions, emphasising that they might be subject to elaboration and possibly to amendment as our inquiry proceeded. In the event, our provisional conclusions that the fire service should remain under local government control, that brigades should be fewer in number and more uniform in their hierarchy and structure and that more should be done centrally to provide them with information and guidance on fire problems remained unchanged. Necessarily, however, we have reached more detailed conclusions on these matters than we were able to convey to the Royal Commissions.

4. We have reached a wide measure of agreement on all our recommendations. One of our members, however, Dr. Macfarlane, has been unable to support two of our recommendations relating to the formation of a central fire service training school for recruits and to the formation of one fire services central examinations board for Great Britain. His note of dissent appears at the end of Chapter XVIII.

5. We wish to pay a most sincere tribute to our secretary Mr. H. V. H. Marks, and his very small staff, and to our assistant secretary Mr. F. J. Reilly for the help we have received from them. Naturally the main burden of organising our meetings and discussions, and collecting and marshalling a vast amount of evidence and information, has fallen on Mr. Marks, who has also played a great part in the preparation of our report. Throughout our deliberations his tact and energy, together with the guidance he was able to give from his knowledge and experience, have been invaluable.

6. We now present our report.

Ronald Holroyd
G. H. Banwell
P. H. P. Bennett
Joseph Crawford
Anne Crichton
Leslie Dobson
Norman Hunt
J. W. Macfarlane
T. G. Randall
A. J. Richmond
Geoffrey P. Shakerley

Mr. H. V. H. Marks (Secretary)
F. J. Reilly (Assistant Secretary)

11th May, 1970

SUMMARY OF MAIN FINDINGS

CHAPTER II—FIRE STATISTICS AND THEIR IMPLICATIONS

1. Insufficient attention has been paid to the collection and, particularly, to the analysis of statistical data which we consider essential for the identification and successful combating of all fire problems. (Paragraph 38.)

2. The efficiency of the fire service in fire-fighting, as judged by speed and size of first attendance of brigades and their performance once they have been called, is highly satisfactory. The problem as regards fire-fighting is to maintain this efficiency in face of increasing fire incidence, mounting costs and difficulties in recruitment. (Paragraph 39.)

3. Fire-fighting is only a last resort. Limitation of loss of life and property in fires must depend mainly on control of the incidence and severity of fires through fire prevention measures. (Paragraph 40.)

4. The number of building fires increased by 88% between 1957 and 1967. More than half this increase was due to fires caused by people, through children with matches, rubbish buming, smoking and malicious actions which, collectively, were three times as frequent in 1967 as in 1957. Over a third of the total increase in fire incidence was due to ignitions arising from the use of fuel and energy, particularly electricity. Over 70% of the increase in the number of fires in buildings irrespective of tfie cause of ignition has been in private dwellings and other private occupancies, which are not directly subject to fire prevention legislation or managerial supervision. (Paragraphs 41-49.)

5. To minimise fire incidence, the primary need is to induce in individuals, by education and publicity, a more knowledgeable and co-operative attitude and a sense of social responsibility with regard to fire. Means need to be found to bring fire prevention measures, including periodic inspection of electrical and fuel installations, into the home. (Paragraphs 47-51.)

6. The number of fires not in buildings varies widely with weather conditions, but the rate of increase generally is much less significant than that for fires in buildings. (Paragraph 52.)

7. The more than threefold increase in recent years in the number of malicious false alarms is disturbing. Offenders should be punished with the maximum severity. (Paragraph 53.)

8. Special services rendered by the fire service form part of the growing burden on brigades. They should be limited to those of a humanitarian nature requiring the special skills and equipment of brigades which are not available elsewhere. (Paragraph 54.)

9. If present trends continue, by 1977 the fire service may have to cope annually with with some 500,000 to 600,000 calls of all kinds. (Paragraph 55.)

10. There has been an underlying upward trend in fatal and non-fatal fire casualties, and nearly 80% of deaths occur in private dwellings. Young children

and elderly people accounted for over half the fire deaths and any improvement in the attendance times of brigades could have only a marginal effect on the number of fire casualties. Reduction of fire casualties depends on the reduction of fire incidence, principally in the home. (Paragraphs 56 to 60.)

11. The annual cost of the fire service increased nearly two and a half times between 1958 and 1968 to £61 million, and will inevitably continue to rise if firemen in sufficient number and of the right calibre are to be recruited and retained. If increase in fire incidence is not stemmed and more whole-time men are needed, costs could be of the order of £150 million by 1977. This calls for continuous study centrally of standards of fire cover and effective use of manpower. (Paragraphs 61-65.)

12. The very high expenditure on fire-fighting throws into sharp relief the small sums spent on educating the public about the dangers of fire, on operational research and on central management studies and services. (Paragraph 66.)

13. Between 1958 and 1968 the estimated property losses in fire increased over four times to £100 million, a much greater rate of rise than can be accounted for by the increased incidence of fire in the hazards mainly responsible and the decreasing value of money. (Paragraphs 67 and 68.)

14. Detailed examination of the causes and nature of high loss fires suggests that extension of fire cover provided by the public fire-fighting services would not have more than a marginal effect on fire losses. These are most likely to be reduced by: (*a*) greater use of automatic detectors giving direct warning to brigades, particularly in premises not in continuous operation; (*b*) more use of automatic sprinklers in buildings containing large quantities of inflammable materials, for example, warehouses, stores, reception and dispatch and waste accumulation areas; (*c*) stricter control of the use of old buildings for high fire risk activities; and (*d*) improved attention by industrial and commercial managements to general housekeeping and maintenance of fire prevention measures. (Paragraph 80.)

CHAPTER HI—THE PRINCIPLES WHICH SHOULD GOVERN THE ORGANISATION OF THE FIRE SERVICE

15. We RECOMMEND that fire brigades should remain under local authority control, but we are of the opinion that there are three important defects in the present system which need to be remedied. Many fire authorities' areas are too small to support viable brigade units; the division of responsibility between some county and county borough fire authorities creates inconvenient boundaries between areas calling for unified fire cover; and the powers and resources of the Home Departments to provide guidelines for brigades to promote the efficiency of the service are too limited. (Paragraph 86.)

16. The fire service in England and Wales should be based on a much smaller number of units than at present and they should be more uniform in size. The efficiency of the fire service in Scotland would be increased if the number of brigades were reduced. (Paragraph 87.)

17. Brigades should be large enough to provide an adequate establishment of senior posts to cover specialist functions and offer reasonable prospects of promotion, but preferably should not exceed a size over which the chief officer could keep in touch with his men and be in effective operational control as distinct from being largely an administrator. (Paragraph 87.)

18. The optimum size of a brigade would be one containing about thirty stations (two part-time stations being considered the approximate equivalent of one whole-time station) corresponding to a range of 1,100 to 1,300 men. Inevitably, however, there must be areas of the country where brigades with fewer or more stations would provide a more acceptable organisation. (Paragraph 90.)

19. It is desirable that responsibility for provision of the fire service and for the enforcement of the building regulations and other fire prevention measures related to public safety should be in the hands of the same authority. (Paragraph 91.)

20. The recommendations of the Royal Commission on Local Government in England would reduce the number of fire authorities, but too many of them would still be below the size we have recommended for an efficient brigade. (Paragraph 94.)

21. We RECOMMEND that those unitary authorities too small for fire service purposes should be combined with other authorities to provide fire brigades of more uniform and viable size. This should result in the number of brigades in England being about 40. We do not favour the creation of joint committees for this purpose but RECOMMEND the formation of combined fire authorities. We hope that provision for this purpose could be included in the legislation which will be required to give effect to local government reorganisation generally, but, if not, we RECOMMEND that the Secretary of State should be given power compulsorily to combine fire authority areas, regardless of their size. (Paragraph 94.)

22. The metropolitan authorities proposed by the Royal Commission on Local Government will provide brigades larger than the optimum we recommend. We accept this with some reluctance because all arguments point to the metropolitan authorities rather than the much smaller metropolitan district councils having responsibility for fire matters. Each metropolitan brigade would have to be organised into separate commands of appropriate size for fire-fighting purposes. (Paragraph 95.)

23. As only a few years have passed since the large scale reorganisation of the London Fire Brigade, we consider that the Brigade should have further time to absorb the readjustments consequent on the reorganisation. (Paragraph 96.)

24. We consider that the number of fire brigades in Wales should be reduced to about five. We do not think that the county boroughs should have separate fire brigades and RECOMMEND that they should be combined with the surrounding county councils for fire service purposes. (Paragraph 97.)

25. We welcome the proposals of the Royal Commission on Local Government in Scotland which would both reduce the number of brigades and dispense with the need to form combined fire brigades in Scotland. We have reservations, however, about the large size of the proposed West Region. (Paragraph 98.)

26. We consider the regrouping of the fire service into larger units in England and Wales to be an urgent matter. Pending the reorganisation of local government, we urge fire authorities in England and Wales to use their existing powers under the Fire Services Acts to combine in order to create larger brigades as the opportunity occurs. (Paragraph 99.)

CHAPTER IV—RELATIONSHIP BETWEEN CENTRAL GOVERNMENT AND LOCAL AUTHORITIES

27. We RECOMMEND that the fire service should continue to be partly financed through the rate support grant system. (Paragraph 103.)

28. We RECOMMEND that there should be no change in the Central Fire Brigades Advisory Councils, apart from changes in their constitution which may be necessitated by the reorganisation of local government. (Paragraph 104.)

29. There is no existing organisation with specific responsibility for the collation of information, the study of basic fire problems and the provision of managerial services and guidance to the fire service. We consider it essential that such work should be undertaken centrally and we RECOMMEND that it should be carried out by an enlarged and strengthened Fire Department of the Home Office. This Department should also have administrative and functional responsibility for the training colleges, for operational research on fire-fighting and fire prevention matters and for other forms of fire research. (Paragraphs 105-107.)

30. We RECOMMEND that for these purposes the Home Secretary and the Secretary of State for Scotland should be given specific statutory responsibility for promoting the efficiency of the fire service and for providing research and management services. A mandatory duty should be placed on the Inspectorate to inspect all fire brigades and report on the efficiency with which fire authorities discharge the whole range of their statutory functions. The Secretary of State's existing powers of control under the Fire Services Acts should be retained. (Paragraph 108.)

31. More specialist staff, of high calibre with the appropriate professional training, qualifications and experience, will be required by the new central organisation, which we RECOMMEND should be fully integrated with the existing staff and divisions of the Home Office Fire Department and should also serve the Fire Department of the Scottish Home and Health Department. (Paragraph 109.)

32. It is essential to the success of our proposals that the status of specialist staff should not be restricted and that promotion along all the civil service channels should be open to them. (Paragraph 109.)

33. We RECOMMEND that the studies and recommendations of the strengthened Home Office Fire Department should always be referred to the Central Fire Brigades Advisory Councils and their appropriate committees for consideration, and that the Councils' views be taken into account by the Secretaries of State before the recommendations are acted upon. The Department should assist the committees of the Advisory Councils by providing information. (Paragraph 110.)

34. We RECOMMEND that the Home Office Fire Department should be free to set up working parties on particular technical problems as the need arises. Membership should not have to reflect membership of the Advisory Councils but should be drawn from the most suitable persons available. (Paragraph 110.)

35. The Fire Service Inspectorate will in future concentrate on their inspectorial functions and some strengthening will be necessary for this purpose. Existing specialist staff not employed on brigade inspections should be integrated with the Divisions of the Fire Department. (Paragraph 116.)

36. We RECOMMEND that copies of reports of HM Inspectors should be sent to the fire authorities concerned. (Paragraph 118.)

CHAPTER V—THE FUNCTIONS OF THE FIRE SERVICE

37. We RECOMMEND that there should be no change in the existing statutory provisions from which the fire service derive their responsibility for extinguishing fires and protecting life and property in case of fire. (Paragraph 122.)

38. There are no grounds for additional financial assistance to fire authorities from the central government to meet the costs of road accident work. (Paragraph 127.)

39. We RECOMMEND that a fire authority's powers to purchase equipment for fire-fighting purposes should be extended to purposes other than fire-fighting on which they consider it suitable to employ the brigade. (Paragraph 128.)

40. We RECOMMEND that firemen's powers to enter premises for fire-fighting purposes should be extended as appropriate to cover special service calls. (Paragraph 129.)

41. We are not in favour of placing a statutory duty on fire authorities to provide an emergency service or of changing the name of the fire service to the fire and rescue service. The service should continue to carry out special service calls of a humanitarian nature which require its special skills and equipment. We RECOMMEND that fire authorities should continue to have statutory discretion to employ their brigades on such special service calls. (Paragraph 132.)

42. We consider that the fire service should not provide a national emergency organisation to deal with peace-time disasters. We RECOMMEND that no change be made in existing arrangements under which fire brigades co-operate in local authorities' contingency plans to deal with such disasters. (Paragraph 133.)

43. Other special services should be accepted only in exceptional circumstances and with charges which are fully economic. (Paragraph 134.)

44. Should the ambulance service in England and Wales remain under local authority control, we RECOMMEND that existing arrangements for combined control of the fire and ambulance services should be phased out as the opportunity occurs. (Paragraph 136.)

45. Fire brigades should be prepared to assist on request at fires at sea where human life is in danger, and we RECOMMEND that minimal contingency plans should be made for off-shore fire-fighting. No changes in the existing statutory position are necessary. (Paragraph 139.)

46. We RECOMMEND that following the reorganisation of local government and the formation of fewer and larger fire authorities, those local authorities which control civil airports should review their arrangements for providing airport fire cover and consider the operational advantages of full integration of their airport and public fire brigades. (Paragraph 142.)

47. We suggest that the working party to study airport fire and rescue operations, which was to be set up following the Report on the accident to the Boeing 707-465 G/ARWE at Heathrow on 8th April, 1968, should also review the case for integration of other airport fire brigades with the public fire service. (Paragraph 143.)

48. We RECOMMEND that government departments which provide their own fire brigades should review their arrangements for providing fire cover at their establishments and consider whether greater operational efficiency and savings in total public expenditure would ensue if at some of their establishments fire cover were provided by the public fire service. (Paragraph 144.)

CHAPTER VI—INDUSTRIAL FIRE BRIGADES

49. The present trend is for more industrial establishments to concentrate their own efforts on fire prevention measures and to leave actual fire-fighting to local authority brigades. Nevertheless, occupiers of some high risk installations in relatively remote areas and industrial organisations with complicated high fire risk processes will wish to continue as hitherto to provide their own works fire brigades. (Paragraph 146.)

50. The imposition of mandatory requirements on industrial concerns which have voluntarily provided works brigades is undesirable and unnecessary. (Paragraph 149.)

51. We RECOMMEND that industrial managements should impress on their works brigades the importance of erring on the safe side when calling for help from the public fire service, and that the circumstances in which such help should be called should be discussed and agreed between the management and the chief officer of the local authority fire brigade. (Paragraph 150.)

52. The enlarged Home Office Fire Department should consider, in consultation with the appropriate organisations representing industrial fire brigades, arrangements for including in national fire statistics reports on fires extinguished by works brigades. (Paragraph 151.)

CHAPTER VII—RECRUITMENT OF WHOLE-TIME FIREMEN

53. There should be no complacency about recruitment of sufficient men to cover the future establishment requirements of brigades. (Paragraph 155.)

54. Premature wastage gives cause for concern. (Paragraphs 156-159.)

55. The generally low educational attainment of recruits joining the service is disturbing. (Paragraph 161.)

56. Personal courage and initiative and willingness to accept the values and attitudes necessarily associated with a uniformed and disciplined service are essential requirements for a successful fireman. (Paragraph 162.)

57. It is highly desirable that recruits should have mechanical aptitudes and intelligence on which training in the intricacies of fire-fighting and fire prevention can be based. (Paragraphs 163-164.)

58. The service has been successful in the past in attracting men who have or can develop these qualities and is well served by its present senior officers who, in general, have few formal educational attainments. In forming an opinion whether men of the required quality will be attracted in the future, it is necessary to consider changes in the public education service since the last war which have resulted in a much greater proportion of school children staying at school longer and obtaining better educational qualifications. The average potential ability of those who leave at the minimum age is lower now than it was twenty-five years ago and this trend will continue. (Paragraphs 165-168.)

59. If recruitment to the fire service is to include the same proportion of potential officers as in the past, the service must attract more men with higher educational qualifications, and must provide more extensive internal education and training schemes to develop the latent talents of those recruits who leave school at or soon after the minimum leaving age. (Paragraphs 168-169.)

60. We do not recommend the introduction of a two-tier system of entry to the fire service as we do not believe that it would be particularly effective or in the best interests of the service. We make recommendations in Chapters VIII and IX which we feel will be more effective in attracting recruits with better educational attainments. (Paragraphs 172-176.)

61. We RECOMMEND that the statutory age of recruitment should be lowered from 18 years to 17 years 6 months, in order that those men from the school-leaving population who complete one or two years in the sixth form without attaining outstanding academic results can join the fire service before they obtain other employment. (Paragraph 177.)

62. The Junior Fireman Scheme has failed to make a significant impact on recruitment either in terms of quantity or promotion potential. We RECOMMEND that it should be abolished. (Paragraphs 188 and 189.)

63. Central publicity should be provided by the Home Office Fire Department to ensure that the opportunities in the fire service for continued education and training and for promotion to senior and responsible posts are widely known. (Paragraph 190.)

64. The Home Office Fire Department should be responsible for continuous study of manpower utilisation to ensure that fire service manpower is used effectively and that the factors responsible for high premature wastage are removed. (Paragraph 191.)

CHAPTER VIII—TRAINING AND EDUCATION OF WHOLE-TIME MEN

65. We commend those responsible for the provision of more comprehensive and progressive training and education for members of the service at the Fire Service Technical College. Nevertheless, more needs to be done to ensure better and uniform standards of recruit training, to train men specifically for promotion, to provide a more effective accelerated promotion scheme and to ensure continuation training for those who will not be promoted beyond fireman or middle officer ranks. Also, we see a need for considerable improvement in teaching personnel and teaching methods. (Paragraph 212.)

66. The present recruit training arrangements in England and Wales leave much to be desired and we unanimously RECOMMEND that recruit training for England and Wales should be provided at a central training establishment as soon as the necessary facilities can be provided; and that the 14 training centres for England and Wales should be phased out when the new central facilities come into existence. (Paragraph 226.)

67. With one exception we RECOMMEND that there should be one central recruit training school for the whole of Great Britain, and that the Scottish Training School at Gullane should be phased out with the 14 centres in England.* (Paragraph 227.)

* See note of dissent by Dr. Macfarlane.

68. We see great advantage in associating the central recruit training school with the Fire Service Technical College and RECOMMEND that an early detailed study of the feasibility of this proposal should be made. (Paragraphs 228-229.)

69. Chief officers should regard it as one of their responsibilities to arrange that firemen and junior officers have the opportunity to serve in stations with a high call-out rate in high risk areas either within their brigade or by secondment to other brigades. (Paragraph 231.)

70. We see no need for any radical change in drill practice arrangements or in the system for keeping them under review by the Central Fire Brigades Advisory Councils. (Paragraph 232.)

71. We accept that the amount of time devoted to station-based training other than drill is bound to be limited, but believe this time could be used more effectively. (Paragraph 233.)

72. Programmed learning techniques offer the best prospects of improved training at fire stations. (Paragraph 235.)

73. If our proposals for the future management of the College at Moreton-in-Marsh are implemented, we RECOMMEND that the Programmed Learning Unit should become an integral part of the College, directly responsible to the Director of the College instead of to the Home Office. (Paragraph 238.)

74. We RECOMMEND that as soon as possible the Fire Service Technical College should provide continuation training courses for all ranks up to and including station officer. (Paragraph 240.)

75. We RECOMMEND that "promotion courses" based on new concepts and objectives should be provided at the Technical College. These would be open to selected firemen, leading firemen and sub-officers who are considered to have potential for promotion but who have not yet passed the relevant promotion examination. Each course would be devised as a specific preparation for the statutory promotion examination. For some years at least the present type of advancement courses should also be provided. Attendance at one of the new promotion courses should not be a pre-condition of promotion or of taking the relevant promotion examination. (Paragraphs 242-247.)

76. We RECOMMEND that the minimum period of service for entry to the accelerated promotion course should be reduced to two years, and that there should be no prior examination or rank requirement. As now, selection should be made from men applying personally through their chief officer. Selection should be rigorous so that only those with outstanding potential are successful. Minimum standards of attainment should be prescribed for a man judged to have completed the course successfully. (Paragraphs 250-252.)

77. Students should not be promoted en joining the course but should be given allowances to equate their pay with that of station officer. On successful completion of the course they should be guaranteed promotion to station officer as soon as they have passed the statutory promotion examination. (Paragraph 253.)

78. The course should be shorter than at present—perhaps about six months in duration. We hope that the number of selected candidates could be increased

eventually to 40 a year. Candidates with more than two years operational experience should not be excluded. (Paragraphs 254 and 255.)

79. We conunend the functional courses at the Technical College. Those for brigade instructors and for fire prevention training are particularly valuable. (Paragraph 256.)

80. We RECOMMEND that the courses at the Fire Service Staff College should be transferred to the Fire Service Technical College, and that the Fire Service College at Dorking should be phased out, because of its non-viability. (Paragraphs 257-260.)

81. If, as suggested, all training is to be carried out at Moreton-in-Marsh, we estimate that there will be a need for 1,400-1,500 resident student places, with a teaching establishment of about 170. The name of the enlarged establishment should be the Fire Service Central College. (Paragraphs 261 and 262.)

82. There appears to be sufficient land available for this expansion. The viability of the proposal rests mainly on the availability of domestic and ancillary staff. If more than one establishment is found to be inevitable, the College at Moreton should provide all courses for the middle ranks of the service, together with the command courses transferred from Dorking, while recruit training should be provided elsewhere, preferably in the Midlands. Such a recruit centre should still form part of the Fire Service Central College for management purposes. (Paragraphs 263 and 264.)

83. We RECOMMEND that the post of Director of the Central College be open to public competition and would favour the appointment of able men with wide experience from walks of life other than the fire service. (Paragraph 265.)

84. To give a civilian Director maximum support with regard to training in practical firemanship and accompanying disciplinary requirements of the fire service, the senior member of the uniformed staff should be Deputy Direetor. (Paragraph 266.)

85. We agree with the recent policy of appointing more civilian tutorial staff to tbe Technical College. The personality of such staff is vitally important; they should take a general interest in fire matters and should work in the closest collaboration with the uniformed instructors. To achieve the best results, a good deal of study of teaching methods and deployment of academic and uniformed staff will have to be undertaken at the College. (Paragraph 267.)

86. We RECOMMEND that the greatest possible freedom to devise the details of courses and to adapt teaching to developing situations should be given to the Director. (Paragraph 268.)

87. We believe there would be value in increasing the responsibilities and decision-taking powers of the College Board, and in including a number of members chosen because of their general experience in matters of education and training. Detailed decisions on expenditure should be left to the College Board. We RECOMMEND that the College Board, renamed the Governing Body and with broadened membership, should be given powers and responsibilities more akin to those of the Governing Bodies of the new Polytechnics and Colleges of Further Education. (Paragraph 269.)

88. We RECOMMEND that the central Government should consider with the local authority associations and the Greater London Council a method of

sharing the cost of the Central College between the Exchequer and fire authorities. (Paragraph 271.)

89. So far as the fire service is concemed neither a first degree nor a post-graduate diploma in fire engineering is likely to be of significant value. (Paragraphs 273-274.)

90. Firemen with the necessary qualifications wishing to study for a degree or diploma course, irrespective of its subject matter, should be encouraged to do so if they have given satisfactory service. Fees, books and travelling expenses, as well as normal pay while absent from work, should be borne centrally and the procedure for selection should be organised by the Home Office. (Paragraph 275.)

91. We RECOMMEND that each brigade should have a senior officer designated as training officer, who would report direct to the chief officer. (Paragraph 276.)

92. We RECOMMEND that each fire authority review its establishment of whole-time men at frequent intervals in the light of current standards of fire cover, the needs of the area and the advice of the Home Office Fire Department. Subject to this, we RECOMMEND that the establishment of each brigade should contain an appropriate allowance for training purposes, which we suggest might be 7½%. (Paragraph 278.)

CHAPTER IX—PROMOTION AND PROMOTION EXAMINATIONS—WHOLE-TIME MEN

93. No change in the rank structure up to and including station officer is necessary. However, at busy stations with a station officer in charge of each watch one of them should be designated as the senior to be generally responsible for the administration of the station, and should be paid a responsibility allowance. (Paragraph 289.)

94. We RECOMMEND that the grades of divisional officer should be reduced to two when brigade areas have been reorganised. (Paragraph 290.)

95. We do not feel that there is a need for a separate deputy chief officer (or deputy firemaster) post in brigades and RECOMMEND that it would be sufficient for one of the assistant chief officers with defined functional responsibilities to act also as deputy chief officer, either permanently or as the need arises. (Paragraph 291.)

96. We RECOMMEND that the same Appointments and Promotion Regulations should apply to Scotland and to England and Wales. (Paragraph 292.)

97. With one exception we RECOMMEND that a single examinations board be established for England and Wales and for Scotland.* (Paragraph 293.)

98. We RECOMMEND that no exemptions should be allowed from parts of promotion examinations other than that already permitted for the leading fireman written examination. (Paragraph 294.)

99. We RECOMMEND that the minimum qualifying operational service period of two years for entry to the leading fireman examination should be reduced to one year. The examination standard should not, however, be lowered. (Paragraph 295.)

* See note of dissent by Dr. Macfarlane.

100. We RECOMMEND that the minimum qualifying period of operational service for promotion to the ranks of leading fireman, sub-officer and station officer should be one and a half years, three years and four years respectively. This recommendation is made without prejudice to the special arrangements we propose for the new accelerated promotion scheme. (Paragraph 297.)

101. We do not favour the introduction of examinations as a pre-requisite for promotion to ranks above station officer. (Paragraph 298.)

102. We RECOMMEND that when a member of the fire service has passed a statutory promotion examination in its entirety he should receive a payment of £30. (Paragraph 299.)

103. We are satisfied with the existing arrangements made between the Central Fire Services Examinations Boards and the Institution of Fire Engineers Examinations Committee for keeping the two examinations for the rank of station officer in step, and see no reason for any change in the present system of having two alternative examinations. (Paragraph 300.)

104. It would be an advantage if the Institution could raise the standard of its Associate Membership Examination, so that it might become a recognised professional qualification. (Paragraph 301.)

105. Future requirements for promotion to the ranks of station officer and above, and the availability of men with the qualifications and experience required for such promotions, should be kept under continuous review. We RECOMMEND that this task should be given to the Home Office Fire Department, which should establish and maintain a central register of men deemed suitable for promotion. Applications for promotion should not be limited to those on the register and all senior officer vacancies should continue to be advertised nationally. (Paragraphs 305 and 306.)

106. We RECOMMEND that all appointments below the rank of assistant chief officer should be made by the chief officer in accordance with arrangements approved by the fire authority. (Paragraph 307.)

CHAPTER X—PART-TIME FIREMEN

107. We have been impressed with the need for the employment of part-time firemen to be maintained and, if possible, extended. Where the number of fire calls is low, employment of whole-time firemen in place of part-time firemen would result in an unnecessary increase in costs and the inefficient deployment of manpower. (Paragraph 308.)

108. We believe that the arrangement whereby whole-time firemen voluntarily undertake retained duties to be in the interests of effective utilisation of skilled and trained manpower. (Paragraph 313.)

109. We RECOMMEND that all possible steps be taken by publicity, persuasion and practical incentives to improve recruitment and prevent wastage of retained men, and to extend their use to other appropriate areas. (Paragraphs 315 and 318.)

110. We urge the National Joint Council for Local Authorities Fire Brigades at an early date to undertake a critical review of the retaining and other fees now paid for part-time service. (Paragraph 316.)

111. We RECOMMEND that modest provision of social amenities, such as have been provided at some of the newer retained stations, should be made wherever possible for retained men. (Paragraph 317.)

112. We RECOMMEND that the new fire authorities should give early consideration to the practicability of extending the use of retained men to provide part of the fire cover on the fringes of urban areas. (Paragraph 318.)

113. The new fire authorities and chief officers of the new brigades should do all they can to ensure harmonious relationships between their whole-time and retained men. (Paragraph 319.)

114. Because of the limited time which retained men spend on training and maintenance duties, we RECOMMEND that this time should be devoted entirely on these duties as distinct, for example, from station cleaning. (Paragraph 320.)

115. We urge that common standards be adopted for the training of retained men, and that the subject be kept under continuous review by the Joint Training Committee of the Central Fire Brigades Advisory Councils. We welcome the provision of short residential courses for retained officers at the Fire Service Technical College. (Paragraph 321.)

116. We RECOMMEND that the single payments for the passing of each promotion examination, which we have recommended for whole-time men, be applied equally to retained men. (Paragraph 322.)

117. Financial compensation should not be paid to employers who release employees for part-time fire-fighting duties during working hours. (Paragraph 323.)

118. We see no justifiable substitute for local volunteers in the thinly-populated areas of Scotland and we cannot recommend that provision for fire-fighting in these areas should be the subject of a specific exchequer subvention. (Paragraphs 325 and 326.)

119. We consider that in these areas the owners and managements of isolated high risk premises, such as hotels, should make maximum fire prevention provision and ensure their staffs have at least elementary training in first-aid fire-fighting techniques. (Paragraph 327.)

120. To stimulate recruitment of volunteer firemen in these outlying areas and to ensure attendance at training sessions, we RECOMMEND that they be paid call-out and attendance fees additional to loss of earnings allowances. The fire authorities concerned should take this matter up with the National Joint Council. (Paragraph 328.)

CHAPTER XI—MACHINERY FOR DETERMINING PAY AND CONDITIONS OF SERVICE

121. We are strongly in favour of retaining national negotiations for fire service pay. (Paragraph 331.)

122. We RECOMMEND the continuance of the National Joint Councils for the fire service, with such modifications to their constitution as may be necessary by the reorganisation of local government. (Paragraph 332.)

123. We recognise that the proper concern of the National Joint Councils for keeping a balance between the pay scales of the services administered by local government could result in insufficient regard being paid to the special qualities required in the fire service. (Paragraph 332.)

124. We consider that the earnings of fully trained firemen with all-round operational experience should be comparable with the national average earnings of skilled craftsmen. This comparison should be made on the basis of average national weekly earnings as distinct from basic rates and should take fringe benefits into account. Due regard should be paid to the fact that an operative in industry is paid for his actual working time, while a proportion of a fireman's weekly hours of duty is spent on standby. (Paragraph 332.)

125. We RECOMMEND that all proposals for rates of pay above the national scale or for special allowances should be considered by the full National Joint Council and that its findings should be accepted by all concerned. (Paragraph 334.)

CHAPTER XII—OTHER METHODS OF INCREASING THE EFFICIENCY AND ATTRACTIVENESS OF THE FIRE SERVICE

126. In view of the difficulty of recruiting firemen with the right combination of qualities and the high cost of their training it becomes increasingly important to use them as exclusively as possible for fire-fighting and for fire prevention. (Paragraph 335.)

127. We RECOMMEND that all firemen should be trained in elementary fire prevention duties and that the use of operational firemen for routine fire prevention inspections should be introduced in all brigades. (Paragraph 339.)

128. We would like to see an extension of arrangements whereby fire brigade representatives give advice to householders on elementary fire prevention procedures. (Paragraph 340.)

129. We RECOMMEND that fire authorities should provide civilian cleaners for station cleaning duties. (Paragraph 341.)

130. A fully-qualified operational fireman should possess all the skills needed in fire-fighting. We are not in favour of any system which would prescribe special payments for specific skills. (Paragraphs 342 and 343.)

131. We should, however, like to see adequate recognition of the value of a fully-qualified operational fireman. We RECOMMEND the introduction of a new grade of senior fireman with earnings comparable with those of skilled craftsmen in industry. Senior firemen would have no supervisory duties and there should be no change in the rank structure. The new grade should be open to firemen of at least three years operational experience who are considered to be fully qualified in all fire-fighting duties. Their pay would be above the maximum of the ordinary fireman's scale but below that for the leading fireman and some changes in differentials would be necessary. (Paragraphs 343 and 344.)

132. We RECOMMEND that with the reorganisation of fire brigade areas fire authorities should review their mobilisation arrangements with a view to centralisation wherever this is practicable. (Paragraph 345.)

133. Apart from disabled men, we consider that operational firemen should not be used for control room duties. We RECOMMEND that those brigades that have not already done so should consider employing firewomen for these duties. (Paragraph 350.)

134. New rates of pay should be negotiated for control room staff and we RECOMMEND that men and women should get equal pay for the work. (Paragraph 351.)

135. We beheve that the practice of employing staff up to the age of 65 on control room duties should cease and RECOMMEND that they should be transferred to other duties at the age of 55. Where transfer is not practicable, operators should retire on the pension to which they would have been entitled at 65. (Paragraph 352.)

136. With the employment of control room operators in larger groups in the future, we RECOMMEND that their promotion procedures should be reviewed by the Home Office Fire Department and some measure of standardisation achieved. (Paragraph 353.)

137. We RECOMMEND that the Home Office Fire Department should review arrangements for the introduction into brigades of modern organisation and method techniques, e.g. standardised reporting forms, greater use of dictating machines, etc. (Paragraph 354.)

138. We RECOMMEND that all legislation requiring the provision of adequate means of escape in particular classes of occupancy should place a statutory obligation on the owners or occupiers to provide the fire authority on request with appropriate building plans. (Paragraph 355.)

139. There is no evidence that existing recommended standards of fire cover are too low or that they are not being complied with. With the larger fire authority areas and the revision of boundaries which we have recommended some economies might be possible. We RECOMMEND that the new fire authorities should review the standards of fire cover in their areas in consultation with the Home Departments. (Paragraphs 357 and 358.)

140. The only means by which the measurable productivity of firemen can be increased is by their offering longer hours of availability. One of the duties of the Home Office Fire Department should be to study all possible duty systems from the standpoint of cost effectiveness and of their attractiveness to the men concerned. The day manning system should be included in these studies. (Paragraphs 359 and 360.)

141. More attention should be paid to the dissatisfaction within some brigades about present communications and relationships between officers and men, and the pattern of communications. We RECOMMEND that supervisory ranks at all levels should be given more supervisory and management training, with particular emphasis on the skills of effective communication and the handling of human relations. (Paragraphs 361 and 362.)

142. Where such appointments have not already been made, we RECOMMEND that consideration should be given to the appointment of suitably trained uniformed personnel officers in brigades. (Paragraph 363.)

143. We RECOMMEND the establishment in every brigade of a consultative committee for the local discussion of all aspects of management, other than pay and conditions of service. Members should be elected by their colleagues and not be nominated by the trade union or staff association to which they belong. Discussion should include technical and managerial matters and not be limited to grievances and welfare matters. (Paragraph 364.)

144. We attach the greatest importance to any measures which could improve the effectiveness of fire prevention legislation. We RECOMMEND that existing proposals for new legislation, together with our own proposals, should be implemented as quickly as possible. (Paragraph 381.)

145. We do not consider it practical to combine into a single Fire Safety Act the fire prevention provisions of the Building Regulations and those of legislation applying to premises once they have been occupied. The proposals already made for new legislation applying to premises once they have been occupied, particularly if they could be amalgamated in a single statute, would go a long way towards consolidating existing legislation. There would then be only two main branches of fire prevention legislation and we RECOMMEND that there should be common codes of practice of national application for both branches. These codes should standardise the essential requirements but leave a degree of flexibility to enable enforcing authorities to apply them in accordance with the needs of individual premises. (Paragraph 382.)

146. Only men with operational fire-fighting experience and knowledge and experience of fire should be used for enforcing fire prevention legislation in premises when they have been occupied. We RECOMMEND that fire authorities, using their fire brigades for the purpose, should be responsible for enforcing all such legislation. (Paragraph 383.)

147. We RECOMMEND that the Building Regulations for England and Wales should cover the provision and protection of means of escape and other structural measures to assist fire brigades in fire-fighting and that the Public Health Act 1936 should be amended to make this possible. (Paragraph 384.)

148. We RECOMMEND that it should be a mandatory duty of the building regulation authority in England and Wales and in Scotland, where it is not also the fire authority, to consult the fire authority before approving plans of new or altered buildings, so that the fire brigade's views may be taken into account. Where the building regulation authority is also the fire authority the views of the fire brigade should be obtained as a matter of course. Responsibility for the final decision would remain with the building regulation authority. Where any question of the relaxation of the fire prevention requirements of the Building Regulations arises, the fire brigade's views should be taken into account by the body responsible for authorising the relaxation. (Paragraph 384.)

149. We consider it anomalous that premises belonging to the Crown, and in England and Wales premises belonging to statutory undertakers, should be exempt from the Building Regulations. We RECOMMEND that the Public Health Act 1936 and the Building (Scotland) Act 1959 be amended to enable the fire prevention provisions of the respective Building Regulations for England and Wales and for Scotland to apply to Crown premises and for England and Wales to those of statutory undertakers. (Paragraph 385.)

150. We consider it equally anomalous that maintained and grant-aided educational establishments in England and Wales should be exempt from the fire prevention provisions of the Building Regulations. We therefore RECOMMEND that the Building Regulations in England and Wales should apply to maintained and grant-aided educational establishments. (Paragraph 386.)

151. We RECOMMEND that the present use classes in the Building Regulations be re-examined to see to what extent a further breakdown would be practicable, particularly within the classes "warehouse" and "industrial", to ensure that where it is proposed to manufacture or store an entirely new product or to change materially the production process in a building, there would be power to review for fire prevention purposes its suitability for the new use. The standards applied for this purpose should not be tempered by the fact that the cost might make the proposed change of use impracticable. (Paragraph 387.)

152. We are concerned that all old buildings should be brought to modern fire prevention standards as quickly as possible. We RECOMMEND that when alterations are made to buildings full compliance with the Building Regulations should be required as a general rule and that lower standards should be accepted only exceptionally. (Paragraph 387.)

153. We accept that H.M. Factory Inspectorate and H.M. Inspectors of Mines and Quarries should have certain reserve powers in relation to the enforcement of fire prevention legislation applying to premises once they have been occupied. (Paragraph 388.)

154. We RECOMMEND that once the Building Regulations have been amended as we propose it should be mandatory on the fire authority to consult the building regulation authority before requiring any structural alterations, and that such alterations should not be to a standard higher than that required by the Building Regulations. (Paragraph 389.)

155. We consider that all educational establishments should be covered by the new legislation proposed by the Home Departments. (Paragraph 390.)

156. We RECOMMEND that all fire prevention inspections of Crown and local government premises and of educational establishments should be carried out by fire brigades. Where there is valid objection on security grounds to particular government premises being inspected by the local fire brigade, inspections should be made by the Fire Service Inspectorates of the Home Departments. (Paragraph 390.)

157. It is most important that statutory fire prevention requirements should be continuously and effectively observed. We RECOMMEND that legislation directed to premises once they are occupied should provide that, in all premises where more than ten people are normally at risk, the owner or occupier should be required to nominate and appoint a senior member of the organisation to be responsible for ensuring the maintenance of all mandatory fire-fighting and fire prevention arrangements at the premises, and for devising and supervising an adequate procedure for ensuring that they are regularly inspected and the results recorded. (Paragraph 392.)

158. We hope that provision for the prohibition of smoking in the more vulnerable parts of industrial and commercial buildings will be included in the proposed new Safety, Health and Welfare legislation. (Paragraph 394.)

159. We RECOMMEND that consideration be given to strengthening the powers under the Housing Acts to ensure that means of escape in houses in multiple occupation are kept free from obstruction and can be safely and effectively used at all times, and to secure adequate inspection. (Paragraph 395.)

160. We welcome the proposed Home Departments' legislation, which will rationalise and strengthen the law requiring fire prevention measures to be taken

in hotels and residential institutions, such as hospitals and old peoples homes, once they are in use and which will empower fire authorities to ensure that appropriate standards of fire prevention are maintained. (Paragraph 396.)

161. We RECOMMEND that the responsibilities for dealing with the safety provisions of the Petroleum (Consolidation) Act 1928 and the Explosives Act 1875 be allocated to members of fire brigades, rather than to officers of other local authority departments. (Paragraph 397.)

162. Following the reorganisation of local government and the strengthening of fire prevention legislation, the need for many of the fire prevention powers in local Acts additional to those provided by general legislation should disappear. We RECOMMEND that the need for their continuing existence should be reviewed by the Home Office through the central government consultative machinery on fire prevention. (Paragraph 398.)

163. We do not believe it practicable at present to introduce additional legislation requiring fire prevention measures to be taken in domestic premises. (Paragraph 399.)

164. We RECOMMEND that the powers under the Consumer Protection Act 1961, to prevent the sale of consumer goods which are unsafe in the hands of the ordinary householder and his family, should be applied as widely as possible and should cover materials and equipment used by householders for repairs, maintenance and improvements. (Paragraph 399.)

165. We RECOMMEND that existing powers to ensure that electrical, gas and oil installations and appliances are properly installed and used in private dwellings should be kept under review and where possible strengthened, for example, by providing powers for periodic inspections. (Paragraph 399.)

166. Some machinery is necessary to ensure that there is co-ordination of policy and of methods of dealing with particular fire prevention problems by government departments. We RECOMMEND that the Home Office, as the department with the widest general interest in fire problems, should be given the responsibility and should set up and maintain the necessary consultative machinery. (Paragraph 400.)

167. We RECOMMEND that the majority of fire brigade officers should receive specialist fire prevention training and have initial experience of fire prevention duties at an early stage of their careers. (Paragraph 401.)

168. We RECOMMEND that the officer in charge of fire prevention within a brigade should be of sufficiently senior rank to report direct to the chief officer, and that he should normally be an assistant chief officer. (Paragraph 402.)

169. We do not see any need at present for professionally qualified civilian staff to be attached to brigades for fire prevention purposes. (Paragraph 403.)

CHAPTER XV—TECHNICAL DEVELOPMENTS

170. In view of the importance of early detection of a fire, the prompt summoning of the fire brigade and, wherever possible, of immediate action to extinguish or contain the fire, we would like to see more technical endeavour directed towards the improvement of automatic detection, alarm and fire-fighting systems. (Paragraph 404.)

171. We RECOMMEND that every encouragement be given to the Post Office to complete the development of their carrier wave signalling system and to arrange for it to be installed throughout Great Britain as quickly as possible. (Paragraph 409.)

172. The mandatory installation of automatic detectors which automatically call the brigade, in such premises as hospitals, hotels, old peoples homes and residential schools, would considerably reduce the life risk in these premises, and we RECOMMEND that serious consideration be given to making such installation mandatory. (Paragraph 410.)

173. The cost of installing automatic detectors or sprinklers in all or a large proportion of industrial and commercial premises would be totally out of proportion to the saving in fire losses that might be achieved. Any legislation would have to be selective and it would be almost impossible to establish criteria by which specifically high-risk premises could be identified and to convince occupiers of the justification for mandatory powers. Moreover, a substantial number of occupiers of the larger and higher risk premises have voluntarily installed automatic equipment, and we believe that with an increase in reliability and a decrease in cost of the equipment there will be a substantial extension of voluntary installation. Encouragement of this approach will be far more effective than mandatory measures. (Paragraphs 411 and 412.)

174. The Home Office Fire Department should take the lead in co-ordinating work on the future development and perfection of alarm systems, and in securing the reduction in cost of automatic detector devices which could be achieved by standardisation of design and by extended production runs. (Paragraph 413.)

175. If the various non-governmental fire protection associations amalgamate they should provide facilities to work out and cost suggested fire-prevention schemes for individual industrial and commercial undertakings. We RECOMMEND that the provision of some financial incentive by government to owners and occupiers to install automatic devices should be considered. (Paragraph 413.)

176. We RECOMMEND that further research be directed towards the development of a device or system for automatic detection or fighting of fires in domestic premises. If and when such a device or system is developed, the government of the day should consider statutory measures to ensure its installation in all new housing. (Paragraph 414.)

CHAPTER XVI—INSURANCE AND THE FIRE PROBLEM

177. The powers of financial persuasion possessed by the insurance industry should be fully used to ensure that fire matters become a more active concern to many managements and that many more organisations voluntarily adopt physical fire prevention measures. (Paragraph 416.)

178. We hope that as the value of automatic detector systems is more fully established this will be recognised by appropriate fire premium rebates. (Paragraph 416.)

179. We hope that insurance companies will be able to make arrangements with owners and occupiers of establishments for the strengthened inspection and maintenance procedure of statutory fire prevention measures, which we recommend, to be extended to cover voluntary installations, such as sprinklers and

detectors. It should also be possible with this system to grade managements according to their interest and efficiency in fire prevention matters and to bring this into consideration when fixing premiums. (Paragraph 417.)

180. We hope that insurance companies will continue to put pressure, and apply it more widely, on managements of premises with bad fire risks, by imposing heavy premium surcharges or refusing to insure premises. (Paragraph 418.)

181. We RECOMMEND that insurance companies give serious consideration to the introduction of domestic fire insurance schemes based on the principle of rewarding the conscientious and penalising the careless. (Paragraph 419.)

182. Statistics relating to fire losses at present provide an inadequate basis for the much needed operational research in this field. We hope that the insurance industry will co-operate with the Fire Department of the Home Office and find a way to supply more detailed information. It is for consideration whether enabling powers for this purpose should be taken. (Paragraph 420.)

CHAPTER XVII—PUBLICITY AND EDUCATION

183. In view of the overwhelming dependence of fire incidence on the behaviour and attitudes of people, present expenditure on fire prevention publicity is derisory. We RECOMMEND that it should be substantially increased and suggest that a figure of not less than 1% of the annual cost of the fire service would be reasonable. (Paragraph 431.)

184. We RECOMMEND that it should be a continuing duty of the Home Departments to conduct research into the most worthwhile methods of mounting fire prevention publicity, and that they should continue to supply fire authorities with advice on publicity campaigns and with publicity material. (Paragraph 432.)

185. The general co-ordinating role of the Home Office in the fire prevention activities of government departments should include fire prevention publicity. (Paragraph 432.)

186. We RECOMMEND that consideration should be given to the use of local radio stations, in addition to the local press, for fire prevention publicity. (Paragraph 433.)

187. We RECOMMEND that the Home Departments should review existing arrangements for fire prevention publicity on television. We would welcome the more frequent showing of filler films on BBC television and consider that time should be bought on commercial television for their showing. (Paragraph 434.)

188. Because of the high proportion of fires caused by children, we RECOMMEND that fire brigades should collaborate with education authorities and individual schools to the greatest possible extent to increase the knowledge and affect the conduct of school children in relation to fire hazards. (Paragraph 435.)

189. We RECOMMEND the setting up of a voluntary association, formed by an amalgamation of the voluntary organisations concerned with fire prevention, to offer a fire prevention advisory service to its members and to play a part in general publicity. The Home Departments should give a lead in its creation and a substantial annual grant should be made by the Exchequer. (Paragraph 437.)

190. In residential establishments the responsibility given to a senior member of the staff for ensuring that all mandatory fire prevention requirements are continuously and effectively observed should be made known to all the staff, and that he should have authority to require time to be found for efficient staff instruction. (Paragraph 438.)

191. The principles governing the interpretation by fire brigades of relevant fire prevention legislation should be embodied in published pamphlets available to architects and members of the public looking for guidance when dealing with specific applications. (Paragraph 439.)

192. There is room for a better flow of information from the fire service to architects, engineers and building surveyors about the experience of the performance of various materials and forms of construction gained in fire-fighting. We RECOMMEND that professional institutions should consider in collaboration with the Home Departments whether the syllabuses for qualifications they confer should require more detailed knowledge of fire prevention than at present. (Paragraph 439.)

193. The main need for education about fire is in the home, and the possibility might be examined of enlisting the help of social workers, who visit so many homes, to include in their advice guidance on domestic fire prevention. (Paragraph 441.)

CHAPTER XVUI—FIRE RESEARCH

194. The needs for research are best known and their priorities best assessed by those bodies directly concerned with implementing the results, for example, the Home Departments and the fire service, which are concerned with fire-fighting and fire prevention in occupied buildings, and the Departments concerned with those aspects of fire prevention involving building design and construction. These bodies should have control of fire research facilities financed predominantly from public funds. (Paragraph 443.)

195. We feel that there is substance in criticisms made of the Joint Fire Research Organisation by user bodies that they have little control, that insufficient priority and effort are given to their practical problems, and that reporting of results is too slow and not in the most suitable form. (Paragraphs 453-456.)

196. Research at the Fire Research Station is limited both by the size of the establishment and by its wide range of incidental activities. (Paragraph 455.)

197. We consider that a radical reorganisation of fire research activities is called for and RECOMMEND that

(*a*) Routine testing of products and materials, as distinct from testing of prototypes, should be separated from research and be carried out by industry, the insurance companies and others concerned.

(*b*) Fire research concerned with design and construction of buildings should be taken over by the building ministries.

(c) There should be a Fire Research Station, concentrating on research on problems which are primarily the concern of the fire service and the Home Departments, which should be under the administrative and functional control of the Home Office Fire Department.

(*d*) The operational research and statistical work now carried out by the Fire Research Station should be combined with the related work of the Home Office Scientific Advisory Branch and taken over by the Home Office Fire Department. (Paragraphs 457-461.)

198. With regard to the siting of these research activities we RECOMMEND that

(*a*) The building ministries should be invited to consider whether fire research in connection with design and construction of buildings could be integrated with the work of the Building Research Station.

(*b*) The site and facilities of the present Fire Research Station at Boreham Wood should be transferred to the Home Office for use exclusively for research and closely associated testing on fire matters which are primarily the interest and responsibility of the Home Office and the fire service. (Paragraph 465.)

199. Should the transfer of control of the Fire Research Station to the Home Office be unacceptable our recommendation would be that

(*a*) The Fire Research Station should become a laboratory for all forms of testing which are not an essential part of research and development, and should remain under the general control of the Ministry of Technology. The existing financial contribution from the insurance companies and their representation on the controlling body could remain unchanged.

(*b*) Fire research connected with building design and construction should be transferred to the Building Research Station and its control to the Building Ministries.

(*c*) A site other than Moreton-in-Marsh or Boreham Wood should be found for a new Home Office fire research station. (Paragraph 466.)

200. We RECOMMEND that the Home Office Fire Department should have powers to augment the work of their proposed new fire research station, by arranging research contracts with other bodies that might possess special knowledge or facilities. (Paragraph 467.)

201. We RECOMMEND that the Home Office Fire Department should keep in close touch with government departments, insurance companies and other organisations with fire research requirements, and should be responsible for ensuring close liaison between all bodies conducting fire research and that action is taken to fill any important research gaps. It should be responsible for bringing together the results of fireground experience and operational research and for disseminating this information to all concerned. (Paragraph 468.)

CHAPTER I

THE DEVELOPMENT OF THE FIRE SERVICE TO DATE

INTRODUCTION

1. The last inquiry into the fire service was carried out by the Departmental Committee on Fire Brigade Services under the chairmanship of Lord Riverdale which reported in 1936.[1] Since that time there have been major changes in the work and organisation of the fire service and important shifts in the balance of control between the Home Departments and fire authorities.

2. When the Riverdale Committee reported, there was no obligation on any local authority except London, Edinburgh, Glasgow and Aberdeen to make any fire brigade provision, either by maintaining a fire brigade of its own or by co-operating in the maintenance of a brigade. In England and Wales the authorities which had fire brigade powers were borough councils, urban district councils, such rural district councils as had obtained from the Ministry of Health urban powers for the whole or a portion of their district, and the parish councils or parish meetings. County councils had no fire brigade powers. In Scotland, which was not included in the terms of reference of the Riverdale Committee, the authorities with fire brigade powers were county and burgh councils.

3. No government department was charged with direct statutory function or responsibility in connection with control and organisation of fire brigades; and there was no central supervision nor any recognised standard of efficiency as regards the strength, training or equipment of brigades. There was no direct Exchequer grant to fire brigades except a grant of £10,000 per annum to the London Fire Brigade in respect of protection of government buildings. The local fire brigade authorities did, however, receive varying sums of money from the State under the arrangements for the distribution of the general Exchequer contribution. These went to the relief of the local rates, including the cost of fire brigade services where they were provided.

FIRE BRIGADES ACT 1938

4. The conclusions and recommendations of the Riverdale Committee were accepted and largely embodied in the Fire Brigades Act 1938,[2] which applied to England, Wales and Scotland and was the first Act that required local authorities to set up their own fire brigades. The obligation was laid upon all county boroughs and county district councils in England and Wales and the councils of all burghs and counties in Scotland.

5. The fire authorities could either provide the local fire services directly or by arrangement with other fire authorities or persons, and every fire authority was so far as practicable to enter into arrangements for mutual assistance with other

1. Cmd. 5224.
2. 1938 C.72.

fire authorities and persons maintaining fire brigades. The right to employ police constables as firemen was limited (it was subsequently abolished in 1948) and existing powers to charge owners and occupiers of properties for services rendered were abolished. The Act provided for the constitution of a Fire Service Commission to report on fire services (with powers to submit to the Secretary of State schemes for the creation of fire authorities, and, on request, to recommend provision of the fire service in any district by another authority) and for the appointment of Fire Service Boards for areas where the Secretary of State was satisfied that efficient fire services were not being maintained. Provision was made for the appointment of inspectors, the establishment of a training centre and the creation of a central advisory council for the fire service. The Secretary of State was also given powers to prescribe standards of efficiency and to require uniformity of appliances and equipment, but no provision was made for Exchequer grant. In the event, the Act was overtaken by the war before the pattern it set could be fully implemented.

THE NATIONAL FIRE SERVICE

6. In 1941 to meet the circumstances created by the war the fire service was nationalised, the fire service powers and duties of local authorities were suspended and these functions were transferred to the National Fire Service. The 10 civil defence regions in England and the Principality of Wales were divided into 33 fire force areas which became the basic operational units of the National Fire Service. In the light of experience the boundaries of these areas were altered from time to time and new areas created, but their total number remained at about 40. Scotland was divided into six fire areas which remained unchanged throughout the war. The central control imposed by nationalisation had the effect of welding some 1,440 fire brigades in England and Wales and some 185 brigades in Scotland into a single operational machine with standardised training, duty systems, uniforms, appliances and equipment and standard arrangements for appointments, promotion, discipline, pay and administration. A pledge was, however, given by the government in 1941 that the service would be returned to the control of local authorities after the war.

THE RETURN TO LOCAL AUTHORITY CONTROL

7. This pledge was honoured by the Fire Services Act 1947[1], but in returning the service to local authority control the Act placed the responsibility for making provision for fire-fighting purposes in England and Wales on the county and county borough councils and in Scotland on county councils and large burghs. In England and Wales a number of fire authorities voluntarily combined or made joint arrangements, and subsequently some fire brigade areas were changed as the accepted recommendation of the Local Government Commission for England and Wales were put into force. Under the London Government Act 1963[2] the Greater London Council became the fire authority for the whole of the London area. There are at present in England and Wales, excluding the Isles of Scilly, 131 brigades provided by local fire authorities. In Scotland under the 1947 Act the

1. 1947 C.41.
2. 1963 C.33

councils and large burghs, except for the town council of the City of Glasgow, were required to combine into 10 areas which were set out in the Fourth Schedule to the Act. Each of these combined areas is served by a single brigade, administered by a joint committee representative of all the fire authorities within the area, while Glasgow administers its own brigade separately. Although the Secretary of State has power to vary these arrangements, no variations have been made to the boundaries fixed by the Act.

8. The large cities and urban areas in Great Britain are served mostly by whole-time firemen but some 60% of county fire brigade establishments is composed of part-time retained firemen. These men, who normally have some occupation other than the fire service, undertake to attend for weekly training and maintenance duties and to turn out in response to calls. For this they are paid an annual retaining fee and turn-out and attendance fees for responding to calls. In England and Wales the strengths of individual brigades range from that of Merionethshire with seven whole-time and 73 part-time men to that of London with 4,908 whole-time men. On 31st December, 1968, in England and Wales the number of whole-time men was 24,047 and of part-time men 13,993. Comparable figures for the 11 Scottish brigades were 2,633 and 2,115 respectively.

9. There is in Great Britain a number of fire brigades additional to those provided by local authorities. The Army and Air Force Departments of the Ministry of Defence and the Board of Trade provide fire brigades at certain of their establishments. The Army Department provides brigades at certain isolated army establishments where it considers that the degree of risk is such that reliance cannot be placed on the immediate availability of first attendance from the local authority fire brigades. The Air Force Department provides an aircraft crash, fire and rescue service at R.A.F. airfields both in this country and overseas The Board of Trade provides fire brigades at those civil aerodromes operated by the Board, advises generally on fire protection arrangements at civil aerodromes in this country, inspects fire and rescue arrangements at licensed and contractors' aerodromes and runs a fire service training school for airport firemen. Among the nationalised industries the British Airports Authority, British European Airways, the British Overseas Airways Corporation, the British Railways Board and the United Kingdom Atomic Energy Authority provide their own fire brigades at certain of their establishments and many industrial firms provide either full-time or part-time fire brigades to deal initially with fires on their premises. There are one or two areas in which industrial brigades provide part cover or reinforcements for local authority brigades outside the factory premises, but in general, industrial units are regarded by fire authorities as a bonus and are not taken into account in establishing the standards of fire cover provided for the local authority area as a whole.

FIRE AUTHORITIES

10. Under section 1 of the Fire Services Act 1947 a duty is placed on every fire authority to make provision for fire-fighting purposes (which are defined in section 38 as "the purposes of the extinction of fires and the protection of life and property in the case of fire") and in particular:—

(*a*) to maintain a brigade of sufficient strength to meet efficiently all normal requirements;

(*b*) to secure the efficient training of members of the brigade;

(*c*) to provide efficient arrangements for dealing with fire calls and for summoning members of the brigade;

(*d*) to obtain information required for fire-fighting purposes in respect of property in the area (this includes information on the character of the buildings, the available water supplies, means of access and allied matters);

(*e*) to organise salvage arrangements for the mitigation of damage resulting from fire-fighting operations;

(*f*) to provide arrangements for giving advice, on request, on fire prevention and means of escape.

11. Section 2 requires a fire authority to join in reinforcement schemes with other authorities for securing assistance for dealing with fires which are beyond the authority's own resources or where reinforcements can be more readily obtained from another authority. Section 3 empowers a fire authority to employ die brigade for purposes other than fire-fighting, for which a charge can be rendered (owners or occupiers of property on which fires occur cannot be charged for services rendered by the brigade), and to employ the brigade outside the authority's area. Section 13 places a duty on the fire authority to take all reasonable measures for ensuring the provision of an adequate supply of water for use in case of fire.

12. Sections 5 and 6 of the Act provide for the combination of fire authorities, either voluntarily or by order of the Secretary of State. The procedure for compulsory combination requires a public local inquiry and the submission of the report and of the draft scheme to Parliament, where it is subject to a negative resolution. An authority with a population of over 100,000 cannot be compulsorily combined with another larger than itself. Under a combination scheme a new and independent fire authority is formed to provide a single brigade for the area, and the constituent authorities lose their individual status as fire authorities. The expenses of the combined fire authority constituted for the area are paid out of a combined fire service fund into which contributions are paid out of the local funds of the constituent areas. Property, rights and liabilities of the constituent authorities held or incurred in connection with the provision of fire services are transferred to the new fire authority, which has power to acquire land and to borrow money for fire service purposes. A combination scheme can be amended or revoked only by a subsequent scheme approved by order of the Secretary of State. The only voluntary combinations made under section 5 of the Act are between Berkshire and Reading and between East and West Suffolk and Ipswich. There have been no compulsory combinations under section 6.

13. Section 7 refers to the procedure for the appointment of joint committees of fire authorities for fire service purposes. Under section 91(1) of the Local Government Act 1933[1] two or more local authorities may by agreement combine to form from amongst their respective representatives a joint committee for any purpose in which the authorities are jointly interested, and may delegate to the committee any functions of the constituent authorities relating to the purpose for

1. 1933 C.51.

which the joint comaittee is formed, except the power of levying a rate, issuing a precept and borrowing money. Under section 7 of the Fire Services Act 1947 the Secretary of State's approval was required for the appointment of a joint committee by fire authorities, but since the passing of the Fire Services Act 1959[1] fire authorities need only notify the Secretary of State of such an appointment. Under these arrangements, unlike those for a combination scheme, the participating authorities remain separate fire authorities and the agreement can be terminated at any time by one of the participating authorities. Joint committees have been formed between Breconshire and Radnorshire, Carmarthenshire and Cardiganshire, Denbighshire and Montgomeryshire, Worcestershire and Worcester County Borough, Newcastle and Gateshead, and Devonshire and Torbay. Until Smethwick was enlarged and renamed Warley, it had a joint arrangement with West Bromwich. In each case the joint committee operates a single fire brigade for the area of the two authorities. As the Fire Services Act 1947 required fire authorities in Scotland (except the City of Glasgow) to combine into areas prescribed by the Act, sections 5, 6 and 7 of the Act do not apply to Scotland.

14. Section 12 provides that one fire authority may discharge any or all of the functions of another authority throughout part or the whole of its area. It is commonly used to secure adjustments of fire cover between neighbouring authorities, but it has also been used to enable Kent to provide fire cover throughout the whole of Canterbury, and Leicestershire throughout the whole of Rutland.

POWERS OF THE SECRETARY OF STATE

15. The Secretary of State for the Home Department and the Secretary of State for Scotland have central responsibility for the fire service in England and Wales and in Scotland, respectively. The Fire Services Act 1947 vested considerable powers of control in the Secretary of State, and his powers were supported by direct grant of 25%. Under the Local Government Act 1958[2] and the Local Government and Miscellaneous Financial Provisions (Scotland) Act 1958,[3] the fire service became a general grant service, and the power which had been given to the Secretary of State under the 1947 Act to make regulations for the payment of grant, subject to the fulfilment of conditions (one of which related to efficiency) was repealed. Under the 1958 Acts the rate of general grant payable to an authority could be reduced if the Secretary of State was satisfied that the authority had failed to achieve or maintain reasonable standards. If this was to be done the authority had to be given an opportunity of making representations, and a report in which the representations were included had to be laid before Parliament and approved by affirmative resolution of the House of Commons. There was power under the Acts to make regulations prescribing standards and general requirements for the administration of a general grant service. Similar arrangements now apply under the Local Government Act 1966[4] and the Local Government (Scotland) Act 1966,[5] which introduced rate support grant in 1967. The powers to

1. 1959 C.44.
2. 1958 C.55.
3. 1958 C.64.
4. 1966 C.42.
5. 1966 C.51.

reduce general grant and rate support grant, and to make regulations in respect of the fire service, have not been exercised.

FIRE SERVICES ACT 1959

16. The Fire Services Act 1959 deprived the Secretary of State of those controls which were thought to bear more on economy than on strict operational efficiency, repealed his powers (not exercised) under the 1947 Act to make regulations prescribing standards of efficiency, but made little change in the specific controls directed to operational efficiency. The Secretary of State also lost control over pay and hours of duty, which are matters for individual fire authorities, who have generally accepted the recommendations in this field of the National Joint Council for Local Authorities' Fire Brigades. This consists of representatives of the fire authorities and the fire service associations. In 1965, national productivity, prices and incomes policy brought these matters under some measure of Government scrutiny. The Secretary of State's control over establishments was also modified by the Act of 1959, so that his approval is now required only to reductions, not to increases. These changes were timed to coincide with the transfer of the service from direct to general grant.

17. The Secretary of State's residual controls over the service are listed in Appendix B. Of these the only ones regularly exercised are those to prescribe the procedure and qualifications for appointment and promotion, to approve the appointment of chief officers, to approve reductions in establishments or fire cover and to regulate pensions and disciplinary matters. No general regulations have been made prescribing standards of training or design or performance of equipment for brigades, although in 1967 regulations[1] were made requiring a safety device to be used in live rescue drills and making the use of such drills compulsory in England and Wales. No regulations under section 21 have been made in Scotland, where live rescue drills are not compulsory but are carried out at the discretion of firemasters. The Secretary of State has recommended that where live drills take place the safety device should be used.

THE CENTRAL FIRE BRIGADES ADVISORY COUNCILS

18. The Secretary of State is required under the Fire Services Act 1947 to constitute a Central Fire Brigades Advisory Council to advise him on any matters arising under the Fire Services Acts (except pay, conditions of service and discipline). The Council consists of representatives of the Home Office, of the local authority associations and of the associations representing members of fire brigades. Other persons with special qualifications may be appointed to the Council by the Secretary of State. Appointments are made for one year and are renewed annually. There is a separate Council for Scotland appointed on the same basis. The Councils are supported by a number of standing and *ad hoc* committees, of which the more important are joint committees for England and Wales and for Scotland. Membership of the Councils and details of the committees are set out in Appendix C. These committees develop common standards and doctrines which are recommended by the Councils to the Secretaries of State, who if they accept them incorporate them in recommendations to fire authorities.

1. S.I. 1967: 1689.

Membership of the committees generally reflects that of the Councils, but representation is not restricted and other Ministries and outside organisations with specialist knowledge, including industry and commerce, can be and are represented as necessary. The Councils are purely advisory. Their advice is not binding upon the respective Secretaries of State, but they must be consulted before the Secretaries of State make statutory orders or regulations under the Act. In most matters the relevant Council's advice, although not binding on fire authorities, is incorporated by the Secretary of State in recommendations, which are generally accepted. Where uniformity is essential and the matter is one on which the Secretary of State has statutory powers, the advice is embodied in regulations.

THE HOME DEPARTMENTS

19. The Fire Department of the Home Office is in the charge of an Assistant Under Secretary of State and for practical purposes consists of two main fire divisions, one of which deals with matters relating to the day-to-day running of the fire service, training, the work of the Central Fire Brigades Advisory Council and its main sub-committees (other than the Fire Prevention Committee) and any other matters concerning the fire service. The other division deals with fire prevention, consumer and home safety, explosives, petroleum spirit and the conveyance by road of other dangerous substances. The two divisions are headed by assistant secretaries and have senior staff complements of seven and six respectively. There is a third division which deals with all building matters with which the Home Office is concerned, namely police, fire service, court and probation buildings. The fire service forms only a small part of its functions, but for convenience the division comes under the general supervision of the Fire Department. Fire service pensions are dealt with together with police pensions in a separate Pensions Branch attached to the Finance Department of the Home Office.

20. Besides the two administrative divisions, the Home Office Fire Department includes the Fire Service Inspectorate, and an Explosives Branch which advises on explosives and dangerous substances. The Fire Service Inspectorate consists of a chief inspector and nine inspectors appointed by Her Majesty and nine assistant inspectors and two engineering inspectors appointed by the Secretary of State. Section 24 of the Fire Services Act 1947, under which they are appointed, provides only that they should obtain information as to the manner in which fire authorities are performing their functions under that Act and as to technical matters relating thereto. It confers no legal basis for the exercise by Her Majesty's Inspectors of any more positive function under the Act, and they have no duties at all in relation to the responsibilities of fire authorities under other statutes, such as those relating to fire prevention requirements in particular classes of premises, to which we refer in Chapter XIII. In practice the main duties of the Inspectorate are to undertake the inspection of local authority fire brigades in England and Wales; to advise the Department on the operational, technical and organisational aspects of fire service matters; to provide the fire service with technical knowledge by means of publications and otherwise; to keep abreast of developments in fire prevention and fire engineering in this and other countries; to hold such inquiries as the Secretary of State may direct and to advise on the operational and technical

aspects of inquiries into fire service matters; to assist in co-ordinating the work of the Staff and Technical Colleges; and to receive foreign fire officers visiting this country and arrange their itineraries and contacts. In practice, the Inspectorate provides the only regular means for co-ordinating the activities of fire authorities and ensuring a measure of standardisation throughout the service. In order that the inspectors who carry out annual inspections of fire brigades should have the necessary experience and authority in their dealings with fire authorities and brigades, it has been the practice to recruit them from among local authority chief officers.

21. In the Scottish Home and Health Department a single branch of a combined police and fire service division deals with fire service matters. The division is headed by an assistant secretary. On the fire service side there is one other senior officer. Branches of other divisions deal among other matters with fire service buildings and pensions. The Scottish Fire Service Inspectorate consists of an Inspector of Fire Services for Scotland appointed by Her Majesty and two assistant inspectors appointed by the Secretary of State for Scotland. Their duties are similar to those of the Home Office Inspectorate.

FIRE SERVICE BUILDINGS

22. Section 3(1)(*a*) of the Fire Services Act 1947 empowers a fire authority to provide accommodation for the fire brigade for their area. Since 1948, nearly 1,000 fire stations have been built. About 500 are still needed to replace out-dated stations and new ones are needed from time to time in areas of new development. Fire authorities' individual building programmes are approved annually by the Home Departments within the limits of the capital investment available and individual projects are subsequently scrutinized centrally for loan sanction purposes. The small proportion of projects financed from revenue, and all projects of the Greater London Council, which obtains authority for its capital commitments directly from Parliament, are not subject to scrutiny by the Home Departments. Since 1965 a Fire Service Building Development Group have carried out user requirement studies and are completing a design guide to help fire authorities in preparing their building schemes, and since 1967 proposals for new operational fire stations have been subject to a system of unit costing to facilitate early approval of building projects for loan sanction purposes.

APPLIANCES AND EQUIPMENT

23. Fire authorities are required under section 1(1)(a) of the Fire Services Act 1947 to provide such equipment as may be necessary to meet efficiently all normal requirements. Two joint committees of the Central Fire Brigade Advisory Councils—the Design and Development Committee and the Uniform and Personal Equipment Committee (see Appendix C)—prepare requirement specifications, taking advice from manufacturers, research organisations and other government departments with expert knowledge of the item in question. The specifications lay down minimum standards and requirements to which appliances and equipment must conform and allow for variations to meet local needs.

24. Section 22 of the Act provides for the Secretary of State at the request of fire authorities to make bulk purchases of equipment, but these arrangements have

never been used and fire authorities place their own orders by competitive tender. Some authorities have central purchasing departments which order personal equipment for a number of their services, including the fire service. In some areas authorities have found it economic to group together to form purchasing consortia.

25. Any new type of equipment for which no specification has been prepared is generally subjected to user trials before being put into operational use. The Home Departments do not purchase major new items of equipment. They are evaluated by the Design and Development Committee, with the co-operation of brigades which have purchased the equipment.

26. Vehicle and equipment maintenance facilities vary from well-equipped workshops in large brigades, capable of undertaking extensive repairs and overhauls, to small workshops in smaller brigades, who rely on the local authority transport organisation or a local contractor for major overhauls.

FIRE SERVICE COMMUNICATIONS

27. Fire authorities are required under section 1(1)(*c*) of the Act to secure efficient arrangements for dealing with fire calls and for summoning members of the brigade. The basic operational requirements for fire brigade communications are:—

(*a*) facilities to enable fire brigades to be summoned to fires and other emergency incidents;

(*b*) a means of quickly processing emergency calls to determine the correct first attendance of firemen, appliances and equipment according to the type and location of the incident;

(*c*) facilities for alerting firemen on duty at fire stations and part-time men at their homes and places of work and transmitting turn-out instructions to them;

(*d*) facilities to enable fire appliances at fires to communicate with fire control; and

(*e*) facilities for firemen engaged on operations to communicate with each other and with mobile controls or fire appliances.

28. Almost all emergency calls are received over the public telephone network through the "999" emergency call service. With the automation of the telephone service, fire brigades generally provide private lines from the "999" emergency call centre to the brigade control. In addition to receiving emergency calls, control centres have to mobilise the resources of the brigade, maintain up-to-date information about the state of readiness of appliances and crews and detailed information about pre-determined first attendances of appliances and equipment. Crews at their stations are alerted to emergency calls by a remotely controlled system for calling them out and transmitting turn-out instructions. In recent years many fire authorities have concentrated control of mobilising at one or more central points. They have to some extent been influenced to do this by the reduction in the number of auto-manual telephone exchanges which handle "999" emergency calls. To meet the centralised control and mobilising requirements of brigades, the Post

Office have designed and produced a remote control and communications system specified by the Home Office. Retained firemen are called out from their homes or places of work by siren and call bells in the daytime and call bells in their homes at night. Sirens have, however, given rise over the years to public complaint on amenity grounds, and a specially designed pocket radio receiver has been designed which will largely replace sirens and call out bells.

29. For mobile communications the fire service relies upon V.H.F. radio schemes similar to those used by the police and until a few years ago most brigades shared the local police scheme. The growth in radio traffic in both services and the problems of priority to which sharing gives rise have made this arrangement inefficient, and separate radio schemes with different frequencies are now being provided for all brigades which require them. Most fire authorities in England and Wales run radio schemes which are installed and maintained by the Home Office Directorate of Telecommunications, but a few brigades, including some in Scotland, have schemes which are provided by commercial firms.

RECRUITMENT AND PROMOTION

30. The qualifications for appointments and promotion of whole-time men in the fire service are prescribed by regulations[1] made by the Secretaries of State, but responsibility for recruitment and promotion rests with individual fire authorities. There is a single tier entry into the fire service and all recruits have to enter at the basic rank of operational fireman. To qualify for promotion to officer rank a man must have passed the promotion examinations and have had the minimum number of years of operational service prescribed by the regulations. There are no regulations governing the recruitment and promotion of part-time firemen.

TRAINING

31. Before the last war, apart from some recruit training and in the large brigades training at brigade level, there was little formal training in the fire service as a whole. Such training first began during the days of the National Fire Service, and continued after the war with the central Fire Service College run by the Home Office, the Scottish Fire Service Training School run by the Scottish Home and Health Department and collective training schools in England set up by the larger fire authorities. Responsibility for securing the efficient training of members of brigades rests with individual fire authorities, and recruit, continuation and specialised training for men in the lower ranks is provided in England and Wales at the local authority collective training schools, and in Scotland at the Fire Service Training School. Courses for senior officers are now provided at the Fire Service Staff College and a new Fire Service Technical College has been established to provide specialist and operational training for men in the middle ranks of the service.

SPECIAL SERVICES PROVIDED BY FIRE BRIGADES

32. No duty is laid upon a fire authority to provide a rescue service other than in a situation involving fire or a risk of fire, but it is empowered at its discretion to

1. S.I. 1965: 577 for England.
S.I. 1968: 1745 (S.159) for Scotland.

employ its fire brigade or fire brigade equipment for purposes other than fire fighting and to charge for services rendered. Attendances made by a fire brigade at occurrences other than fires are known as special services, which cover a variety of emergency situations such as rail, road and aircraft accidents, collapse of buildings, flooding of premises, leakage of noxious gases and liquids, release of persons locked in premises or trapped in lifts and the rescue of persons or animals from precarious situations. Other special services which are not of an emergency or humanitarian nature are undertaken by arrangement, e.g. the emptying of swimming pools, filling of water tanks, testing of fire extinguishers, etc. For life saving, rescue and other services urgently necessary in the public interest no charges are made. Charges are generally made, however, for services provided by arrangement, although this is a matter for each fire authority to decide and there is no uniformity of practice.

FIRE PREVENTION

33. The first general legislation which made fire prevention a duty of fire authorities was the Fire Services Act 1947. Section 1(I)(*f*) of the Act requires them to make efficient arrangements for giving, when requested, advice in respect of buildings and other property as to fire prevention, restricting the spread of fire and means of escape in case of fire. The need for authoritative advice on fire prevention had, however, been recognised long before the passing of this Act. Local licensing authorities had turned for assistance to officers of professional fire brigades for advice on the practical application of regulations made under the Cinematograph Act 1909[1]. Fire brigade officers were also asked for advice on means of escape under the Factories and Public Health Acts. Their assistance was sought in devising fire drills in hospitals and schools and they were asked to give lectures and demonstrations on aspects of fire prevention. Gradually a number of fire brigade officers began to spend a significant amount of time on such work. By 1939 the London Fire Brigade had found it necessary to set up special branches for these purposes. After the fire service was nationalised, as the need for fire service officers qualified in fire prevention became apparent, courses on the subject were run at the central Fire Service College. By the time that the fire service was returned to local authority control in 1948 fire prevention had become an established feature of fire brigade activity in many areas.

34. Although since 1948 the volume of work arising under section 1(1)(*f*) of the 1947 Act has increased as industrial and commercial occupiers have sought advice on the fire risk to their property, the bulk of fire prevention work in brigades now derives from the statutory functions laid on local authorities under other statutes, which seek to ensure public safety by means of legally enforceable requirements. Most of these provisions have been enacted piecemeal to combat particular risks as they have arisen, and place responsibility for enforcement on different types of authority. We refer in greater detail in Chapter XHI to the purpose and extent of existing fire prevention legislation.

FIRE RESEARCH

35. When the Riverdale Committee reported in 1936 there was no central agency responsible for fire research and the Committee recommended that the

1. 1909: C.30.

Department of Scientific and Industrial Research should establish a fire prevention research board, upon which the government departments concerned should be represented, to initiate and supervise scientific research into questions of fire protection and fire extinction. Shortly before the Committee reported, the Fire Offices' Committee (an organisation of fire insurance companies) had established a fire testing station are Boreham Wood, Elstree, to provide facilities for tests of fire resistance. These were made available to the Building Research Station for work on the fire resistance of building materials and structural elements.

36. The war intervened before the recommendations of the Riverdale Committee could be fully implemented. When towards the end of the war the Government was considering arrangements for the resumption of research on the peacetime aspects of fire, the Fire Offices' Committee was proposing to extend its research facilities at Boreham Wood, and it was agreed to estabhsh a single joint fire research organisation, the cost of which would be shared equally by the Department of Scientific and Industrial Research and the Fire Offices' Committee. The Joint Fire Research Organisation was established in 1946 under a Joint Fire Research Board to carry out research on prevention and extinction of fires, on the safety of life in fire and on the mitigation of damage. The Fire Offices' Committee agreed to bear half the running and capital costs of the organisation and transferred to the Department of Scientific and Industrial Research the existing fire testing station, buildings and adjoining land at Boreham Wood.

37. The Joint Fire Research Organisation is now run jointly by the Ministry of Technology and the Fire Offices' Committee. The cost is no longer shared equally: the Fire Offices' Committee subscribes £125,000 towards the annual cost of the Fire Research Station, which was £379,000 in 1968. The Joint Fire Research Organisation is the main agency for fire research in Great Britain, and the results of its research are disseminated in reports and papers published by Her Majesty's Stationery Office and in journals, by lectures and symposia given by the staff of the Station, and by answers to the many technical inquiries received at the Station. Besides conducting physical research on fire, the Fire Research Station compiles the annual United Kingdom Fire Statistics*, a statistical analysis of reports on fires attended by fire brigades in the United Kingdom.

* Published by H.M.S.O.

CHAPTER II

FIRE STATISTICS AND THEIR IMPLICATIONS

INTRODUCTION

38. One of our first tasks was to examine the fire statistics to acquaint ourselves with current fire problems and trends. A report to the Fire Research Station is made on a standard form in respect of every fire attended by a local authority fire brigade and these reports provide a mass of statistical data, much of which is summarised annually in the United Kingdom Fire Statistics to which we have referred in paragraph 37. The Fire Research Station carries out a certain amount of operational research based on these data and recently additional work of this nature has been done in the new operational research section of the Home Office Scientific Advisory Branch. From the commencement of our investigations, however, we have found that only a limited number of our questions on trends in fires and their underlying causes could be answered immediately as a result of detailed analysis of the statistics already carried out by these bodies. We have had to spend a great deal of time ourselves on analysing the published data and for this purpose have often had to arrange for additional information to be extracted from the original fire reports. Even so, information on some aspects of fire including fire losses was found to be disappointingly meagre. These remarks should not be taken as a criticism of the bodies at present responsible for collating and analysing information. They have very hmited facilities and we gratefully acknowledge the help and co-operation which we have bad from them. We are disturbed, however, at the low importance which seems to have been attached by successive Governments to this work which we regard as essential to the understanding and control of the problems of fire and the provision of management guidance in the fire service.

THE EFFICIENCY OF THE FIRE SERVICE IN ITS FIRE-FIGHTING ACTIVITIES

39. The statistical information shows that the time and scale of first attendance by fire brigades at well over 90% of fires were made in accordance with recommended standards and that predetermined arrangements for obtaining supporting appliances worked smoothly and efficiently. There is no evidence of any increase in the average extent of spread of fires over the past decade, or that more than a marginal decrease in fire losses or in the number of casualties in fires could be achieved by a quicker or larger attendance by fire brigades once they have been called. This is in fine with the evidence given to us by many individuals and organisations and with our own impressions on our visits to fire brigades. In our visits abroad we have been gratified to hear of the high regard which foreign fire authorities have for British fire brigades. The problem of fire-fighting is to maintain present performance with increasing fire incidence, mounting costs and difficulties in recruitment, all of which we discuss later.

40. Fire-fighting, although of the highest importance, is nevertheless a last resort. Reduction in the incidence of fire and, when it does occur, limitation of its

intensity and spread are basically the only ways to reduce the seriousness of the fire problem, and on these issues the present position and the future outlook are not encouraging.

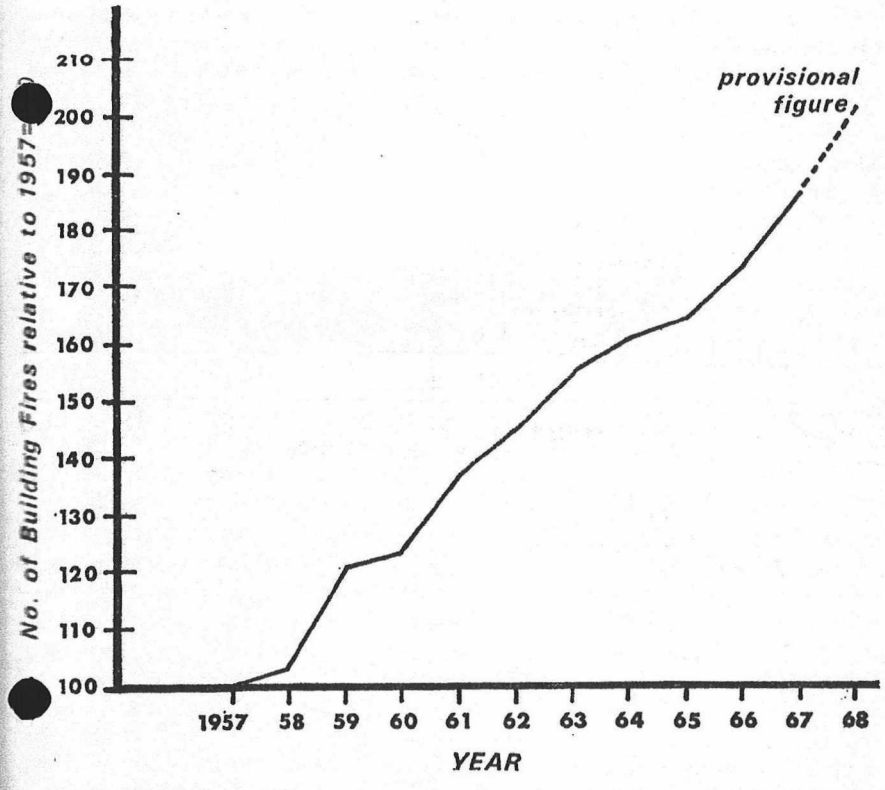
FIRES IN BUILDINGS—CAUSES OF IGNITION

41. In 1967, the last year for which full statistics are available, the number of fires in buildings attended by United Kingdom fire brigades was 95,447, an increase of 88 % on the 1957 figure of 50,694. As shown in figure 1, there has been a continuing increase in the number of fires year by year and the provisional figure of 102,450 building fires in 1968 indicates that it still continues at much the same rate. This high rate of growth is disturbing since it far exceeds that of industrial production, population, number of houses or any of the factors which might be expected to affect the incidence of fire.

Fig. 1

GROWTH OF ANNUAL FIRE INCIDENCE IN BUILDINGS

1957 to 1967



42. The statistics relating to the various causes of ignition of fires in buildings over the decade reveal that some causes have contributed much more than others to the increase in annual fire incidence. Tables 1 and 2 show that the main contribution has come from two groups of causes. The first comprises children with

matches, etc., rubbish burning, smoking and malicious intent. All of these stem from carelessness, lack of discipline, absence of a sense of responsibility or other personal failings in individuals and account for as much as 51·4% of the total increase. The second group, made up of causes of ignition directly concerned with the use of fuel and energy, has contributed 35·1% in spite of a negative contribution of 7·1% due to a reduction in the number of fires originating in solid fuel installations. Fires associated with electrical installations are by far the most significant in this group, contributing 26·3% of the total increase in building fires over the decade.

TABLE 1

CONTRIBUTION OF DIFFERENT CAUSES OF IGNITION TO FIRES IN BUILDINGS

A % of total fires in 1957
B % of total fires in 1967
C % of the increase in annual incidence between 1957 and 1967

Cause of Ignition	*A* %		*B* %		*C* %	
Children with matches	9·6		18·8		29·1	
Rubbish burning	1·9	22·0	5·8	35·9	10·2	51·4
Smoking	9·8		8·7		7·4	
Malicious or Intentional	0·7		2·6		4·7	
Electrical Appliances	17·3		21·5		26·3	
Gas Appliances	6·5		5·9		5·2	
Oil Appliances	7·5		5·6		3·5	
Other Fuel Appliances	1·8		2·8		4·0	
Acetylene and Liquefied Gas	1·0		2·0		3·2	
Solid Fuel Appliances	14·4		4·3		minus 7·1	
Other Specified Causes	16·2		9·7		2·3	
Causes not specified or unknown	13·3		12·3		11·2	
TOTAL	100·0		100·0		100·0	

TABLE 2

INCREASE BETWEEN 1957 AND 1967 IN BUILDING FIRES ASCRIBED TO DIFFERENT CAUSES OF IGNITION

Cause of Ignition	*Number of Fires in 1967 as % of that in 1957*
Children with matches, etc.	366
Rubbish Burning	565
Smoking	167
Malicious or Intentional	686
Electrical Appliances	235
Gas Appliances	171
Oil Appliances	141
Other Fuel Appliances	290
Acetylene and Liquefied Gas	388
Solid Fuel Appliances	56
Other Specified Causes	113
Unspecified or unknown causes	174
All causes	188

43. The very high proportion of the increase in fire incidence which is accounted for by the first group of causes is particularly worrying because it shows that people are becoming increasingly apathetic and irresponsible as regards fire. This factor must almost certainly have played an indirect part in originating many of the large number of fires attributed in the statistics to other or unidentified causes of direct ignition.

44. Figures 2, 2(*a*), 2(*b*) and 2(*c*) show the rates of increase in the number of fires attributed to specific causes over the 1957-67 period. These data intensify our concern about fires caused directly by human failings, which are clearly still increasing at an alarming rate. Children with matches, etc., have caused 3·7 times

Fig. 2

GROWTH OF ANNUAL FIRE INCIDENCE IN BUILDINGS DUE TO SPECIFIC CAUSES

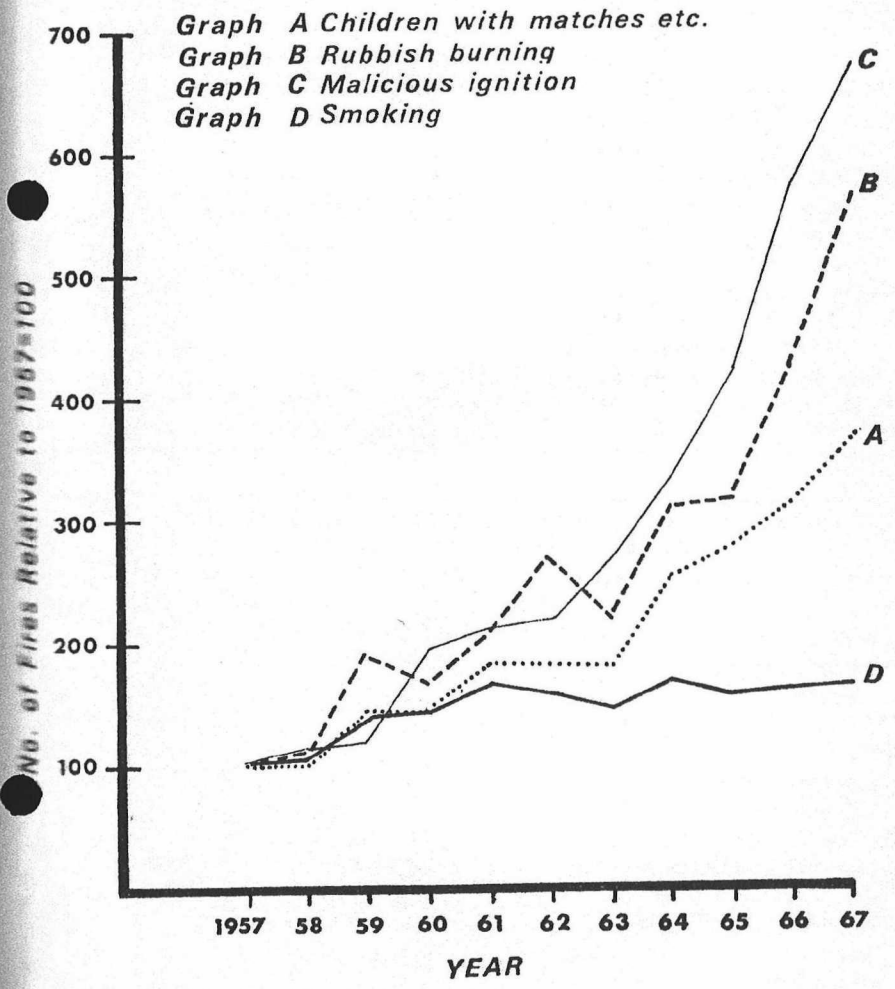


Fig. 2(a)

Fig. 2(b)

GROWTH OF ANNUAL FIRE INCIDENCE IN BUILDINGS DUE TO SPECIFIC CAUSES

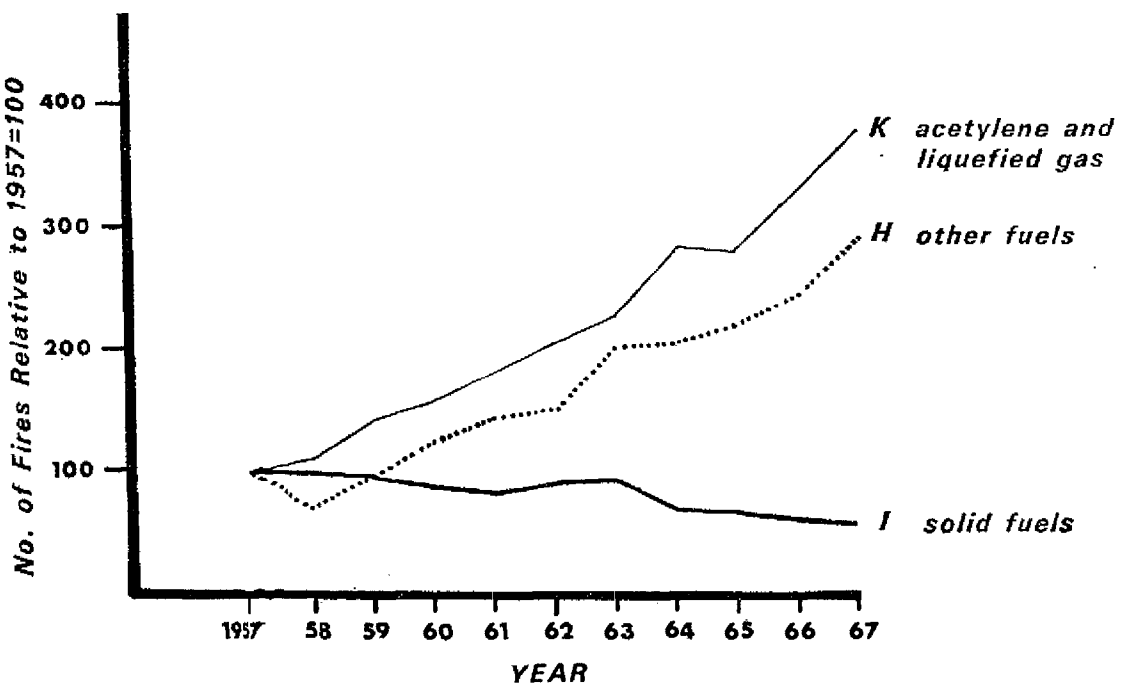


Fig. 2(c)

as many fires in 1967 as in 1957 and the shape of graph A in figure 2 shows a rise at a compound rate of 15% throughout the period. There were 5·7 times as many fires due to rubbish burning and 6·9 times as many due to malicious and intentional ignitions in 1967 as in 1957, and graphs B and C in figure 2 show a rise at a compound rate of over 20% in each case. Fires due to smoking rose only to 1·7 times the 1957 figure and this increase occurred almost entirely in the first few years of the decade. Recently the annual number of fires due to smoking has been practically constant.

45. If these trends were to continue unchanged the number of fires caused through children with matches, rubbish burning, malicious ignitions and smoking could exceed 100,000 a year by 1977.

46. Electrical fires, the other big contributor to increase in fire incidence, were 2·3 times as frequent in 1967 as in 1957 but graph E in figure 2(*a*) shows a linear rather than a compound rate of growth during the decade, and suggests that fires from this cause are unlikely to increase at anything like the rate of those considered above. Much the same apphes to the other causes of ignition and, again assuming continuance of present trends, by 1977 there could be 80,000 fires in addition to the 100,000 due to human failings making a total of 180,000 a year. This is obviously only a very rough estimate but it serves to show the vital necessity to curb some of these major increases in fire incidence if fire brigade establishments are not to be greatly increased and the cost of fighting fires to become intolerably high.

FIRES IN BUILDINGS—TYPES OF OCCUPANCY

47. The results of a study of the relative contribution of different types of occupancy (which we refer to as hazards) to the number of fires in buildings between 1957 and 1967 are summarised in table 3. The outstanding fact which emerges is that two hazards alone, first private dwellings and secondly other private occupancies (which include unknown occupancies and derelict property) account for 73% of the total increase in building fires over the decade and, by 1967, for 65% of all building fires in that year. If fires in the construction industry, which is particularly prone to fires caused by children with matches, rubbish burning, etc., are included, these figures become 77% and 68% respectively. A high rate of increase in fire incidence over the period 1957 to 1967 is also shown by these same hazards. The growth of fire incidence in private occupancies excluding dwellings but including derelicts and unknown occupancies was outstanding, there being 3·6 times as many fires in 1967 as in 1957. Figure 3 indicates that there is no slackening in this rate of increase. Fires in dwellings increased to 1·7 times the 1957 figure over the decade and figure 3(a) suggests that the rate of increase was accelerating in the last two years. Provisional figures for 1968 confirm this. It is significant that the buildings comprising these hazards are mostly not subject to fire prevention legislation or managerial supervision. For example, the only controls applying to individual dwellings are the building regulations, which apply only to new and altered buildings, and the limited legislation which bans the sale of a few dangerous household articles. Apart from this, there are no powers to ensure even a minimum of fire prevention measures or to influence the behaviour of occupants, for example, by statutory inspection of the premises. The importance of managerial supervision is illustrated by the course of events in the construction

industry. Between 1957 and 1965 fire incidence in this industry increased even more rapidly than that in private occupancies other than dwellings, but then showed a marked drop following an intensive campaign by the industry to improve safety generally.

TABLE 3

CONTRIBUTION OF DIFFERENT HAZARDS TO FIRES IN BUILDINGS

A % of total fires in 1957
B % of total fires in 1967
C % of the increase in annual incidence between 1957 and 1967

Hazard	*A* %	B %	C %
Agriculture, Forestry and Fishing	5·5	3·6	1·4
Industry excluding Construction	10·1	8·3	6·2
Construction	3·1	3·5	3·9
Gas, Electricity and Water	0·4	0·4	0·5
Transport and Communication	1·7	1·6	1·6
Distributive Trades	7·5	5·5	3·3
Financial, Professional and Miscellaneous Services	5·7	5·8	6·0
Places of Public Entertainment	1·5	0·9	0·2
Clubs, Hotels, Restaurants, etc.	5·5	4·2	2·8
Public Administration and Defence	1·9	1·6	1·3
Private Dwellings	44·9	41·1	36·9
Other Private Occupancies, Derelict and Unknown Occupancies	12·2	23·5	35·9
All Hazards	100·0	100·0	100·0

48. Most other hazards are subject to fire prevention legislation relating to the particular type of occupancy, to statutory inspections and to some degree of managerial supervision. The evidence suggests that these factors have a beneficial effect. For example, industrial hazards are vulnerable to fire because they involve fire and heat and the use or storage in bulk of inflammable materials as a necessary part of their operations. Despite this, they have contributed less than a quarter of the increase in incidence of building fires in the last 10 years and only a third of the total building fires in the year 1967. Table 4 and figures 3(*a*) and 3(*b*) show that, in the main, the rate of increase in fire incidence in these hazards has been relatively low and does not seem to be accelerating, although latterly the group of hazards covered by financial, professional and miscellaneous services has been an exception.

49. Fires in private dwellings are of particular concern because as table 3 shows they contribute so largely to total current building fires (41 % in 1967) and because they are, as will he seen later, responsible for the majority of fire fatahties. Table 5 shows that private dwellings contributed a disproportionate share of the total of fires caused by electrical and fuel appliances. Figures 4 and 4(a) show that, particularly in recent years, the number of fires in private dwellings caused by electrical and gas installations is increasing more rapidly than is the consumption of these forms of energy, although this is not the case with fires due to oil and solid

fuci installations (figures 4(*b*) and (*c*)). All this demonstrates the desirability of introducing more fire prevention measures into the home. The possible effectiveness of such measures when they can be applied can be seen in graph E of figure 4(*b*) which shows the dramatic drop in fires due to domestic oil appliances following the ban of certain types of oil stoves.

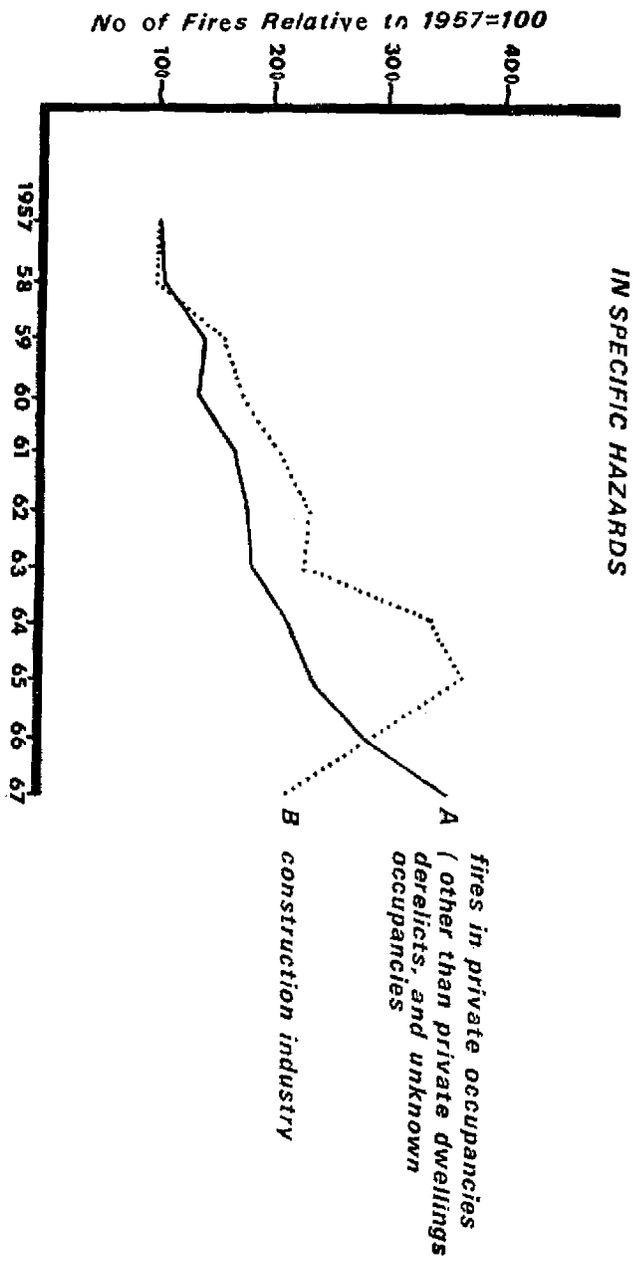


Fig. 3

INCREASE IN INCIDENCE OF BUILDING FIRES IN SPECIFIC HAZARDS

Fig. 3(a)

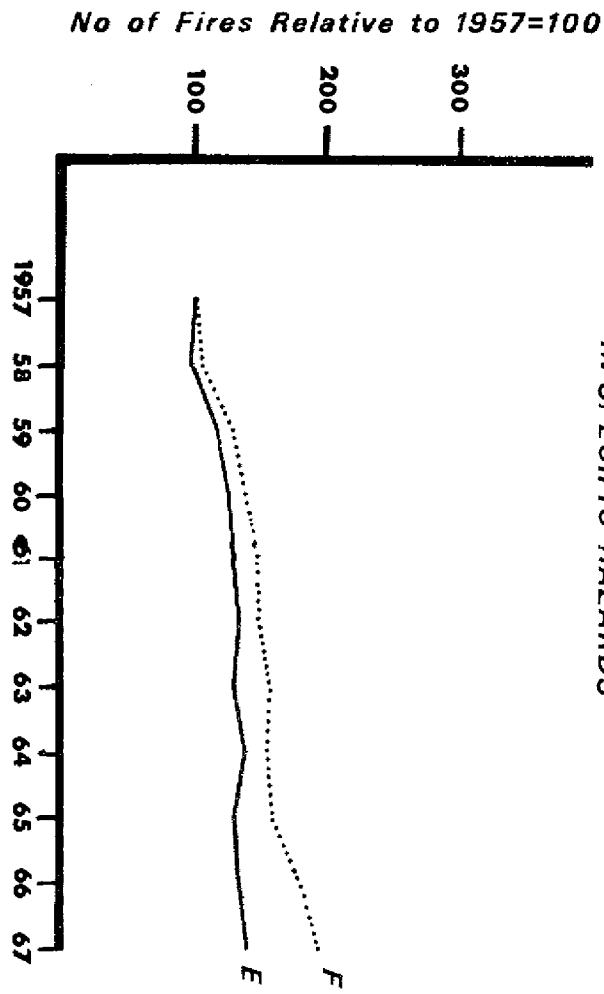


Fig. 3(b)

INCREASE IN INCIDENCE OF BUILDING FIRES IN SPECIFIC HAZARDS

TABLE 4

INCREASE BETWEEN 1957 AND 1967 IN BUILDING FIRES IN DIFFERENT HAZARDS

Hazard	*Number of Fires in 1967 as % of that in 1957*
Agriculture, Forestry and Fishing	123
Manufacturing Industry	154
Construction Industry	214
Gas, Electricity and Water	225
Transport and Communication	184
Distributive Trades	140
Financial, Professional and Miscellaneous Services	192
Places of Public Entertainment	110
Clubs, Hotels, Restaurants, etc.	145
Public Administration and Defence	160
Private Dwellings	172
Other Private and Unknown Occupancies and Derelicts	359

TABLE 5

PROPORTION OF BUILDING FIRES IN 1967 DUE TO VARIOUS CAUSES OF IGNITION WHICH OCCURRED IN PRIVATE DWELLINGS

Cause of Ignition	*Percentage of all fires attributed to this cause, which occurred in private dwellings*
Children with matches, etc.	14
Rubbish Burning	2
Smoking	38
Malicious or Intentional	22
Electrical	68
Gas	67
Oil	59
Solid Fuel	77
Liquefied Gas and Acetylene	13
Other Fuels	38
Unspecified or Unknown	22
All Causes (i.e. percentage of all fires which occurred in private dwellings)	41

Fig. 4

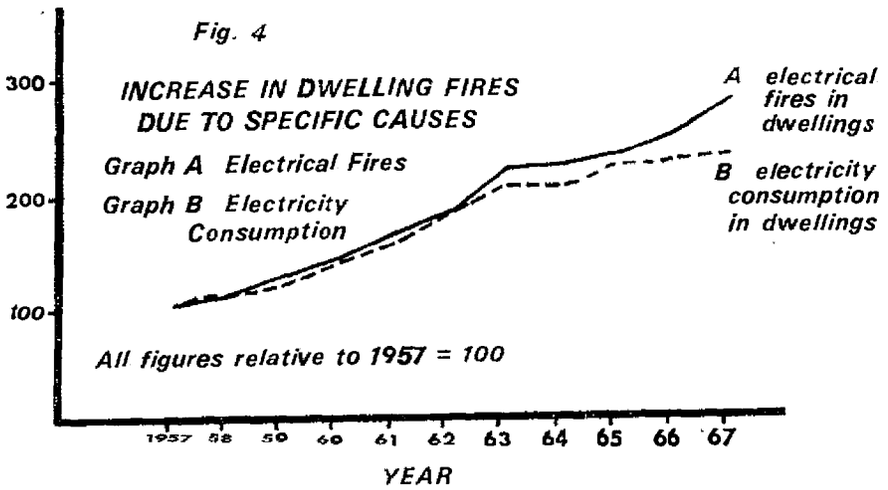


Fig. 4(a)

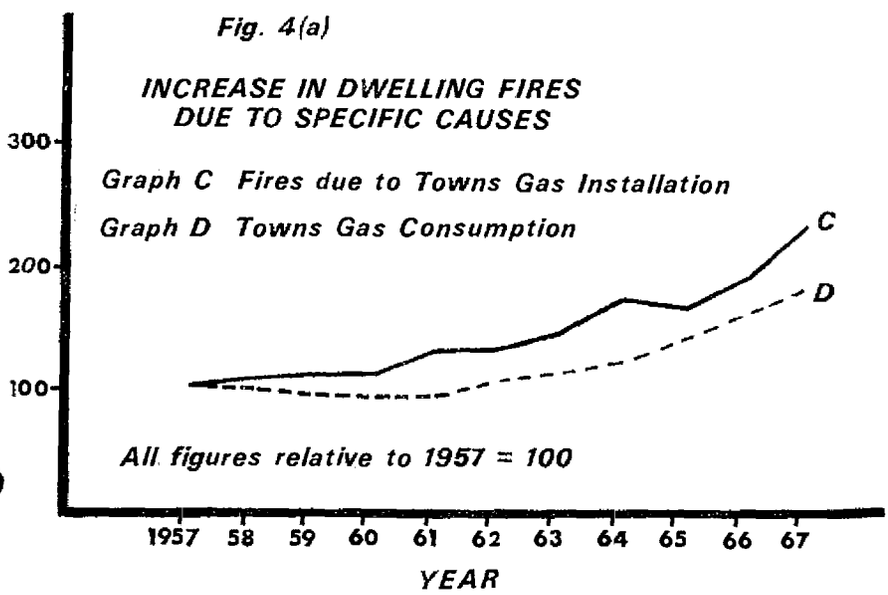


Fig. 4(b)

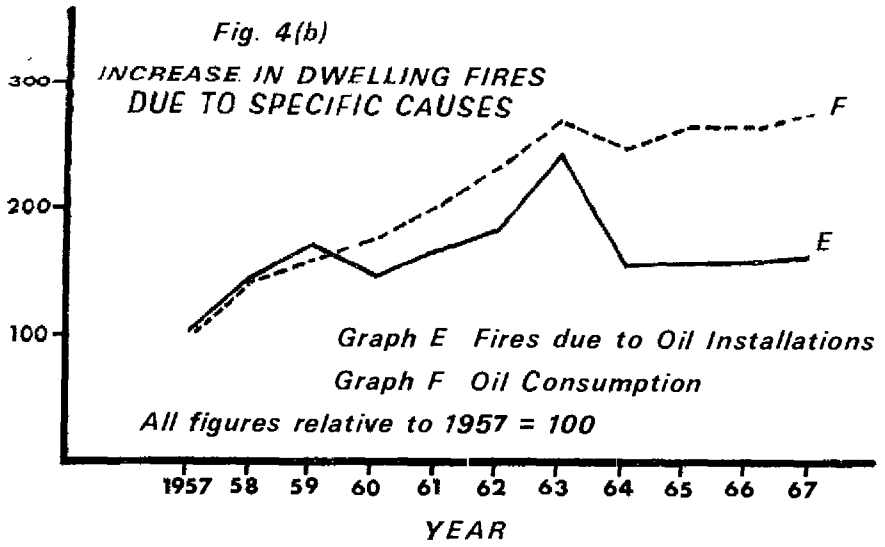
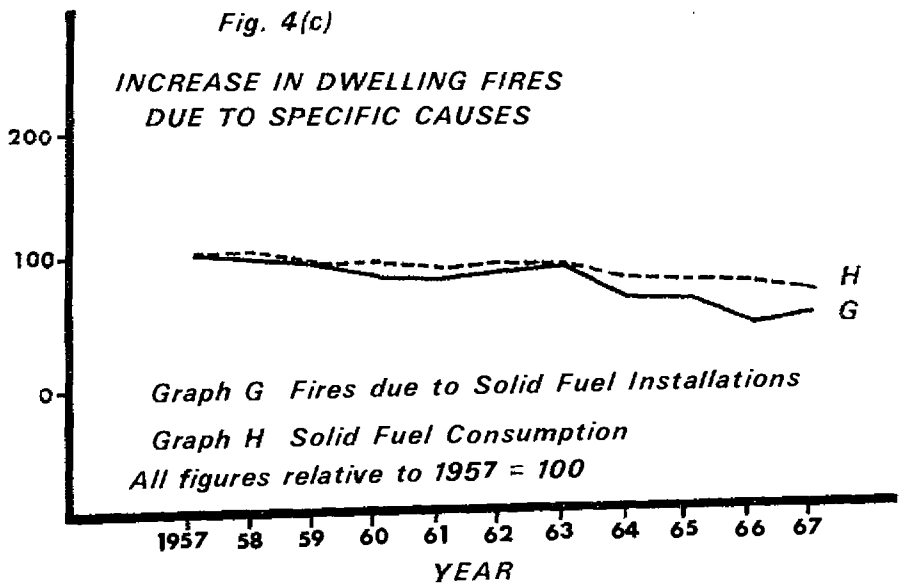


Fig. 4(c)



50. Summarising, we regard this continuing increase in fire incidence as a most serious matter. Most of it is due to fires in private occupancies including dwellings, none of which are subject to any significant degree to fire prevention legislation and in none of which the occupants are subject to any managerial supervision. Although such fires possibly contribute to a relatively small extent to fire losses, they do impose a growing burden on the fire brigades and their increased incidence must be curbed. Because of the substantial contribution of electric, gas and oil appliances to domestic fires, consideration will have to be given to the introduction of some form of periodic inspection of such fuel installations. The basic need, however, is for the inducement in individuals of a more knowledgeable and co-operative attitude and of a sense of social responsibility with regard to fire and its dangers. An intensified educational effort is clearly needed combined with a wider appreciation of the extent to which fire brigades can assist with advice. This is discussed in more detail in Chapter XVII.

51. The emphasis which we have given to the incidence of fire in premises in private occupancy does not imply that we are complacent about fires in industrial and commercial hazards. Much evidence has been received which clearly shows a need for greater interest to be taken by managements in fire matters, for better housekeeping in factories and other undertakings and for continuous inspection and maintenance of fire prevention measures. Suggestions on how to secure improvements in these matters are made in Chapter XIV.

INCREASE OF FIRES NOT IN BUILDINGS

52. The number of fires not in buildings varies widely from year to year according to weather conditions. There were, for example, 176,000 such fires in 1959 and only 50,000 in the previous year. It would appear, however, that weather conditions have a similar effect on non-building fires irrespective of their cause of ignition. Thus, if the percentage contribution of fires due to a particular cause of ignition shows a persistent increase or decrease over a number of years, it can justifiably be assumed that this represents a definite trend. Table 6 shows the principal causes of fires not in buildings expressed as a percentage of total fires in each year from 1957 to 1967 inclusive. Children with matches, etc., have been the largest contributor throughout the period and the figures suggest that their contribution has increased by about 60% to 80% during the decade, happily a much lower rate than is the case with building fires. The contribution by rubbish burning shows only a very slight increase, while that of smoking shows a definite decrease since about 1959 or 1960. In 1967 fires due to malicious or intentional ignitions were roughly five times what they were at the start of the decade but even in 1967 this contribution was only 1%. An interesting fact which emerges is that the contribution of sparks from railway locomotives in 1967 was less than a third of what it was six or seven years earlier, due to the replacement of coal-fired engines by diesel and electric locomotives and to better fire prevention arrangements on embankments. Assuming continuance of these trends, one might expect that by 1977 the number of fires not in buildings in an average year would be of the order of 110,000 as compared with the present figure of 90,000 to 95,000.

TABLE 6

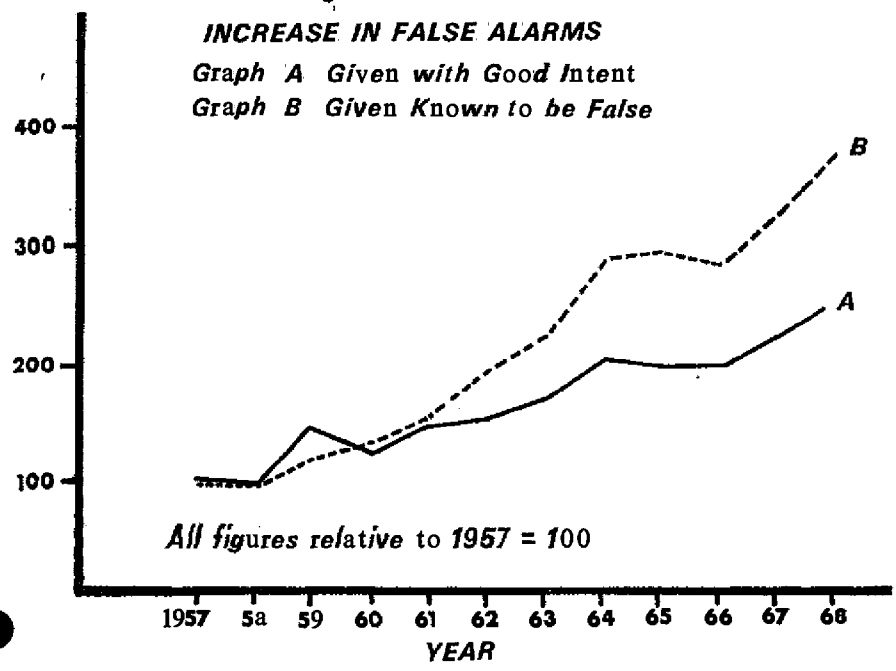
PRINCIPAL CAUSES OF FIRES NOT IN BUILDINGS
(Percentage of total fires in year attributed to particular cause)

Cause	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*
1. Children with Matches, etc.	20·6	30·5	24·9	26·4	25·0	31·0	30·0	34·8	36·7	33·8	37·2
2. Rubbish Burning	8·0	7·1	8·4	7·8	9·0	9·4	9·6	9·0	9·1	10·4	9·9
3. Smoking	9·9	9·4	16·0	13·1	13·5	11·4	9·7	11·0	10·3	9·9	9·3
4. Malicious	0·2	0·2	0·1	0·3	0·3	0·4	0·3	0·4	0·7	0·8	1·0
5. Locomotives	24·9	11·2	19·2	15·9	18·8	13·5	11·5	10·0	7·3	5·7	4·8
6. Other Known Causes	21·6	28·1	17·1	24·1	20·8	21·5	25·3	22·7	22·3	26·8	24·6
7. Miscellaneous and Unknown	14·8	13·5	14·3	12·4	12·6	12·8	13·6	12·1	13·6	12·6	13·2
TOTAL	100	100	100	100	100	100	100	100	100	100	100

FALSE ALARMS

53. An additional burden on fire brigades is the growing number of false alarms. In 1967, the number of false alarms given with good intent was 38,023 or 2·1 times the 1957 figure. This rate of increase was greater than that of fire incidence but, although it suggests some degree of irresponsibility, it would be unwise to discourage people from giving alarms of this kind. Much more disturbing is the fact that the number of alarms made knowing them to be false was 41,721 in 1967, 3·2 times that in 1957. There were also 4,804 false alarms due to apparatus failures in 1967 bringing the total false alarms in that year to 84,548. The rates of increase of the two main types of false alarms are shown in figure 5, which includes the data for 1968. These suggest that, if present trends continue, there could well be 50,000 false alarms given with good intent and 70,000 or more given maliciously by the year 1977. Including false alarms due to apparatus failure the total could be of the order of 125,000 a year. We have been glad to note that the maximum penalty for knowingly giving a false fire alarm was increased ia 1968 and we hope that the courts will punish offenders with the maximum severity.

Fig. 5



SPECIAL SERVICES

54. The special services rendered by fire brigades either by arrangement or in emergency are discussed in detail in Chapter V of the report. They have to be mentioned here, however, because they form a part of the rapidly-growing burden on fire brigades. In 1967, these special services were rendered 52,500 times as compared with less than 23,000 in 1957. The figure for 1968 is nearly 64,500, an increase of 23% on 1967. It is clearly desirable that the special facilities of fire brigades should be made available for special services, particularly in emergency situations. If the present trend continues and even if only the most essential special services are rendered, the call for such services may more than double over the next 10 years. Even so, this would be a very light load compared with that which we have noted in other countries in which the fire brigades accept full responsibility for emergency and rescue services. As we point out in Chapter V, we are strongly of the opinion that in this country, where we are faced with the probability of greatly increased calls on fire brigades for fire-fighting and fire prevention purposes and also with increasing difficulty in recruiting firemen, special services should be limited to those of a humanitarian nature requiring the special skills and equipment possessed by brigades but not available from elsewhere.

55. Considering all the factors to which we have referred, it would appear that, unless something urgent and effective can be done, particularly to improve the attitudes and behaviour of people, fire brigades might well have to cope with between 500,000 and 600,000 calls per annum by 1977. The corresponding figure in 1967 was approximately 350,000. These figures include an estimate of about 50,000 chimney fires.

FIRE CASUALTIES

56. The number of casualties in fires attended by fire brigades has fluctuated considerably from year to year but, as shown in figure 6, there has been a definite underlying upward trend both in fatal and non-fatal casualties. In 1967, deaths in fires at 779 and non-fatal casualties at 4,650 were respectively 1·54 and 1·46 times the 1957 figures, although a considerable part of the increase incurred in the middle part of the decade and the rate of increase in the last two or three years has been less pronounced.

57. By far the greatest proportion of fire deaths occur in dwellings. Table 7 shows that this hazard has accounted for 79% of all the fatal fire casualties occurring over the years 1963-1967 inclusive. This is not surprising if one considers that it is in dwellings that young children and elderly people are mostly at risk. The statistics show that deaths of children under six and men and women over 65 during the period 1963-1967 inclusive have accounted for 56% of all fire fatalities. As we have said in paragraph 47, other major factors are the absence of enforceable fire prevention legislation applicable to private dwellings and the fact that the occupants are not subject to any managerial supervision. Moreover, many of those who died were alone in the dwellings when the fire occurred. Fires in industrial buildings accounted for only 3·4% and those in all other buildings totalled only 7·6%. The remaining 10% of all fire fatalities occurred in non-building fires, particularly those concerned with means of transport.

TABLE 7

CONTRIBUTION OF DIFFERENT HAZARDS TO FIRE FATALITIES

Hazard	*Percentage of all fire deaths in period 1963-1967 inclusive*
Private Dwellings	78·9
Fires not in Buildings	10·1
Industry	3·4
Distribution	0·8
Catering, Hotels, etc.	2·2
Financial, Professional and other Services	1·9
Private Occupancies, other than Dwellings, etc.	1·0
Others	1·7
TOTAL	100·0

58. The extent to which the various causes of fire contributed to deaths in dwellings is shown in table 8, the figures being expressed as percentages of the total fatalities in building fires during the period 1963-1967 inclusive. Apart from unknown causes, smoking has been the largest contributor followed closely by fires caused by the use of electricity, solid fuels, oil and gas, particularly for space heating. In many cases, for example, in fires caused by smoking in bed, faulty electric blankets or ignition of clothing by contact with open coal, electric or gas fires, the casualty has been personally involved from the very outset of the fire. In other cases children, invalids and older people have not been mobile enough to get away and have succumbed to suffocation or carbon monoxide poisoning due to smoke. No improvement of the fire-fighting service could be expected to reduce fire fatalities of this kind.

Fig 6

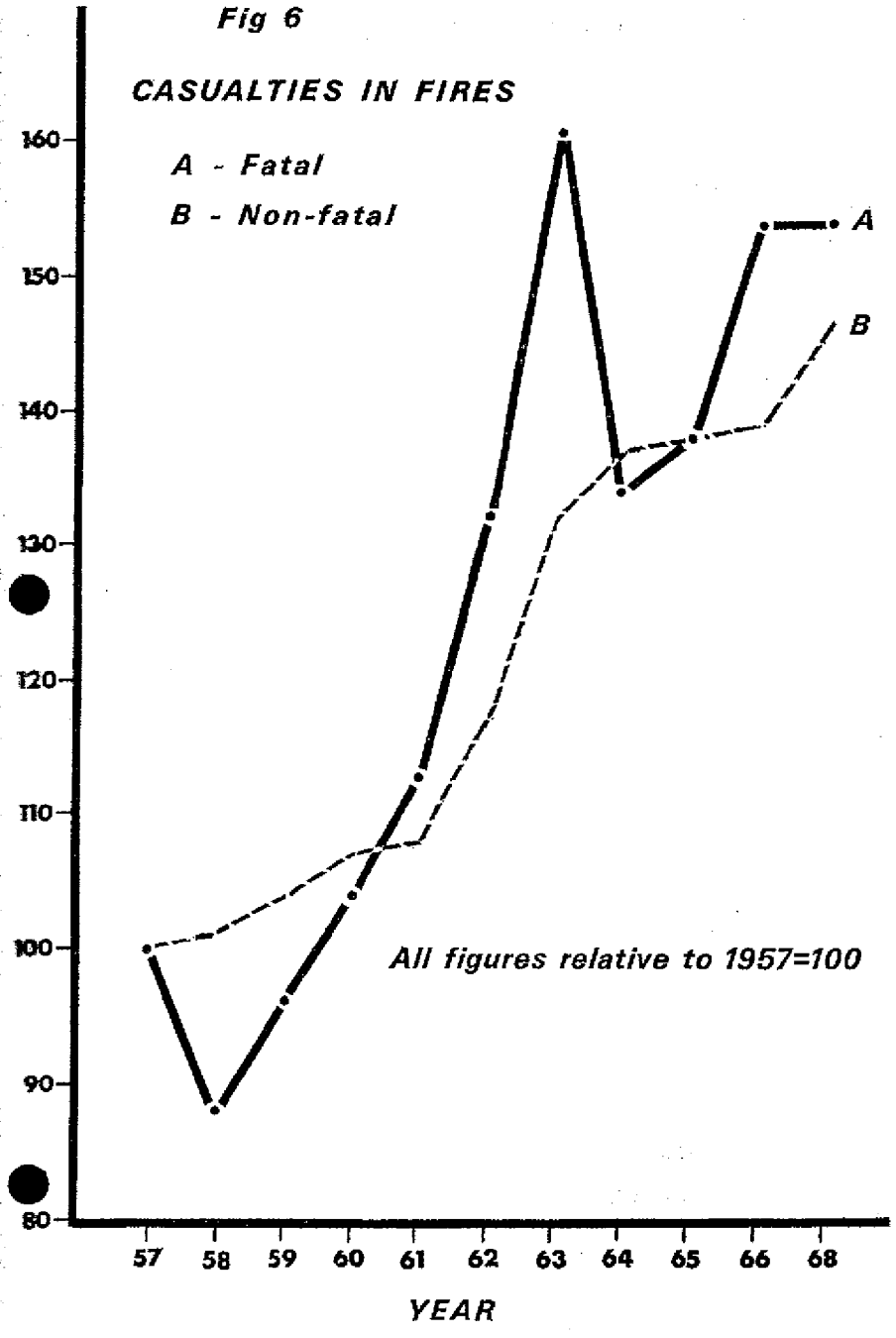


TABLE 8

CAUSES OF FIRES IN WHICH DEATHS OCCURRED IN DWELLINGS IN PERIOD 1963-1967 INCLUSIVE

Cause of fire	*Percentage of total fire deaths in dwellings*
Smoking	17·8
Children with matches	4·2
Malicious	0·6
Electrical	17·3
Gas	4·7
Solid Fuels	16·9
Oil	8·3
Other Specified	6·2
Unspecified or Unknown	24·0
TOTAL	100·0

59. Fire brigades currently rescue or assist in the rescue of roughly the same number of people as die in fires and all the evidence suggests that, even if it were possible to improve materially the attendance times of brigades, the number of rescues could not be increased or deaths reduced to more than a marginal extent.

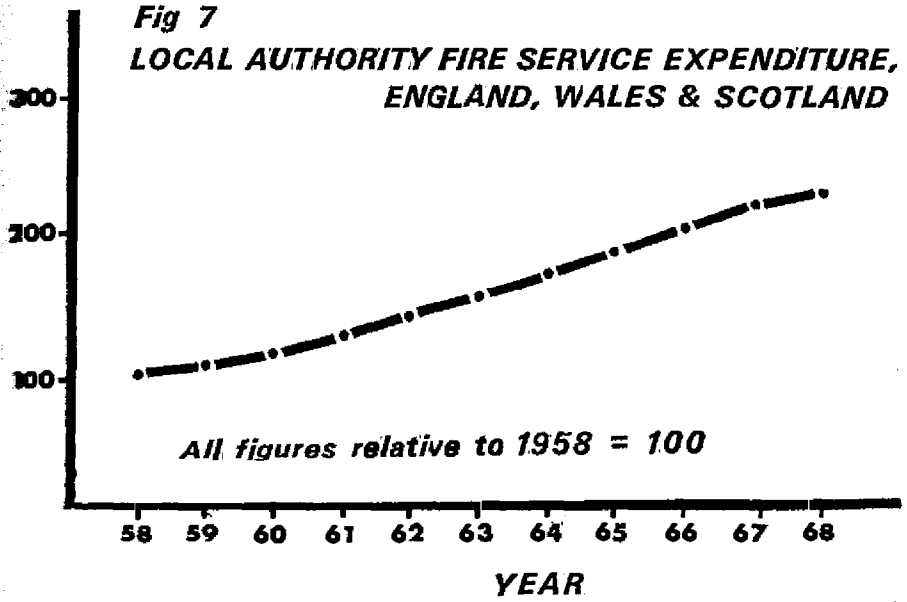
60. Reduction of fire casualties must, therefore, depend on the reduction of fire incidence principally in the home and on more thought being given by individuals, especially those responsible for children and old people, to the dangers of fire, the elimination of dangerous types of heating appliances and the introduction of more fire prevention measures generally.

COST OF THE FIRE SERVICE IN GREAT BRITAIN

61. We turn now to the operating costs of fire authorities—a factor of great importance in the overall fire problem, but one which appears to have received little notice compared with that given to fire casualties and the capital losses incurred in fires. In 1968 the expenditure by fire authorities in Great Britain exceeded £61 million which, as shown in figure 7, was 2·32 times the 1958 figure or more than half the total estimated cost of property losses for the whole of the United Kingdom.

Fig 7

LOCAL AUTHORITY FIRE SERVICE EXPENDITURE, ENGLAND, WALES & SCOTLAND



62. Wages, salaries and pensions account for the major part of these operating costs. Increased rates of pay, coupled with the need to employ more men because of changed manning systems involving a shorter working week, have been responsible for a large part of the growth in cost over the decade. However, some increase has been due to expansion of fire authority manpower to meet the growth of fire incidence and the needs of fire prevention activities.

63. It is our considered view that, even without any significant increase in personnel, operating costs are bound to continue to increase apprecia bly. The fire service will have to be made more attractive financially to ensure the recruitment and retention of men in sufficient numbers and of the calibre needed under present-day conditions. Training and internal education in the service will also have to be expanded. These and other relevant factors are discussed in detail in later chapters.

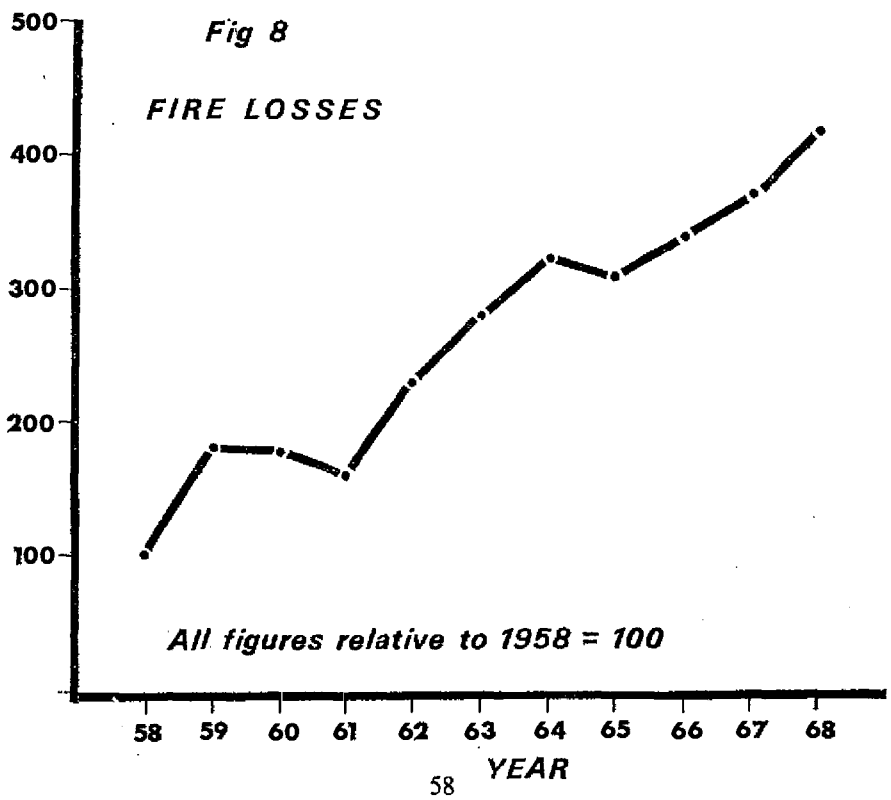
64. If the increase in fire incidence is not stemmed and manpower has to be increased, costs will rise even more and it would not be exaggerating the seriousness of the position to envisage an expenditure of some £150 million a year 10 years hence. The position could be even worse if for any reason there were a falling-off in the availability and use of retained firemen, and fire services in rural areas had to be manned, most uneconomically, with whole-time men.

65. The magnitude of these operating costs and the danger of their serious inflation in the future clearly call for continuous study of standards of fire cover and the effective use of manpower in the fire service as a whole. This should be carried out centrally by people with full knowledge of the technicalities of the service and as part of a generai programme of operational research. We elaborate this view and make specific recommendations on the subject in Chapter IV.

66. The very high present and potential future expenditure by fire authorities, which is mainly on the maintenance of fire-fighting services, throws into sharp relief the ludicrously small sums devoted to such matters as educating the public at large about fire and its dangers, operational research and central management studies and services. We consider that increased expenditure on such activities would more than pay for itself, even if it achieved only moderate success in stabilising or reducing the number and seriousness of fires, the frequency of false alarms and the calls on fire brigades. Serious consideration should also be given to the provision of financial incentives in order to encourage the implementation of appropriate fire prevention measures. We refer in more detail to these matters in subsequent chapters.

PROPERTY LOSSES

67. Property losses in fire have already been referred to as something of great public concern and it is unfortunate that it is in this area that least information is available. An estimate of total losses, which is published annually by the British Insurance Association, is made up of the initial claims in excess of £10,000 made on commercial insurance companies, plus an assessment of losses in government and other establishments which are not insured in the ordinary way and a further allowance or weighting for losses amounting individually to less than £10,000. The estimate covers loss of buildings, machinery and stocks of raw materials, intermediates and finished products but does not include loss of profits. In 1968, the published loss figure was £100 million which, as shown in figure 8, was 4·15 times that in 1958.



68. Between 1958 and 1968 the number of fires in hazards mainly responsible for fire losses increased about 1·6 times and the average cost of manufactured products increased about 1·26 times at current money values. An increase in fire losses over the decade of the order of 2·02 times (the product of these two factors) would be understandable, if disappointing, in view of the effort put into the implementation of building regulations and fire prevention provisions, which although primarily directed to saving life, might be expected also to reduce material loss. The fact that the actual increase in fire losses has greatly exceeded this figure means that other factors have increased the seriousness of the average fire to an extent which more than counterbalances the beneficial effects upon fire losses of fire prevention measures.

69. Over the past four years 1965, 1966, 1967 and 1968, out of a total of £347,350,000 estimated fire loss for the United Kingdom, £119,705,000 (34·4%) has resulted from only 430 fires each costing over £100,000. There were 3,170 fires costing between £10,000 and £100,000 and they contributed £91,600,000 (26·2%). These two groups together accounted for less than 0·5% of all fires. The remaining £136,045,000 loss or 39·4% of the total resulted from the estimate of losses in fires costing less than £10,000 each, to which we refer in paragraph 68.

70. We have no knowledge of the relative contribution of different hazards to the loss in fires costing individually less than £10,000 but, over the past four years, the £211,305,000 damage done in fires costing over £10,000 was made up of £136,519,000 (64·7%) in manufacturing industry, £34,691,000 (16·4%) in commercial undertakings and £40,095,000 (18·9%) in all other hazards including utilities. We have not been able to analyse the hazard contribution to damage in fires each costing over £100,000 for the United Kingdom as a whole, but the contribution to the £91·6 million cost of such fires in England and Wales was 72% by industry, 21% by commerce and 7% by other hazards. Assuming this distribution to apply to the whole of the United Kingdom, it is calculated that the make-up of the £91·6 million damage in fires costing between £10,000 and £100,000 is 55% by industry, 10% by commerce and 35% by other hazards. It is therefore a reasonable deduction that only about a third of the losses in fires costing less than £10,000 is attributable to manufacturing industry. On this basis, the contribution of industry to the grand total of fire loss in the past four years has been of the order of £185 million or 53%, a lower proportion than is generally believed to be the case.

71. Practically all industrial, commercial and service establishments of any size comprise physical assets worth more than £10,000 and, in a great many cases, more than £100,000 and, in the event of a fire breaking out, it could result in a "large" or "major" fire loss. In practice, however, the number of large and major fires is a small proportion of the whole and, in looking for ways to combat high fire losses, it would be most helpful to know what makes a fire a big fire. For this reason, we collected detailed information about all fires costing over £100,000 each in England and Wales during the four years 1965-1968 in order to find whether they show any significant common features.

72. Delay by fire brigades in making their first attendance is certainly not characteristic of these major fires. Attendance time was 10 minutes or less in 98% and 5 minutes or less in 80% of the 336 major fires included in the survey. We do not consider that it would be practicable to improve on these times, and there is no

evidence to suggest that any such improvements would lead to a significant reduction of fire losses.

73. On the other hand, the study indicated that delay in discovering a fire had been a very significant factor. 188 (56%) of all the major fires occurred in premises in which the staff were not working when the fire broke out. These fires accounted for just under 50% of the total major fire loss of £96·1 million. Only 19 (less than 6%) of these premises had sprinklers or automatic detectors or both and only about half of these detectors had an alarm system which automatically called the fire brigade. Of the 12 sprinkler installations involved, seven failed to operate for a variety of reasons, such as being shut off, out of commission, lack of adequate water supply or damage by falls of roof, or explosions. Three other sprinkler installations were only partly effective because they did not cover the area of the initial fire. All but one of the 10 detectors involved operated satisfactorily but, as stated above, many did not automatically call the fire brigade. Eleven of the undertakings concerned maintained some form of private fire-fighting organisation but few if any of them appeared to have been available when the premises were closed.

74. It is not surprising, therefore, that in 170 out of the 188 premises involved, it was known or strongly suspected that the fire had been undetected for a period exceeding 20 minutes and in many cases for several hours. The fires were thus in an advanced stage of development on the arrival of the brigade and it was usually impossible to identify the cause of the fire or even its initial location.

75. Moreover, 56% of the closed premises in which major fires took place were built or partly built before 1914 and many in the 19th century. 19% were put up between 1914 and 1939 and only 25% were modern buildings. Thus, in the majority of these fires, once they had reached significant proportion, spread was extremely rapid due to open staircases, collapse of partitions and roofs and oil-soaked floors.

76. Forty-five (13%) of the major fires occurred in premises operating on shift and these accounted for approximately 18% of the total major fire costs. Eleven of these premises (25%) had sprinklers or automatic detector installations installed and 20 (45%) maintained some form of fire-fighting force. Of the nine sprinkler installations two failed to operate due to damage and two were only partially effective because of the position of the sprinkler heads. Only one of the five automatic detectors failed to work but most of them did not automatically call the fire brigade. There was proved or strongly suspected delay of more than 20 minutes in discovery of a fire in only seven (16%) of the premises operating on shift and there were no cases of very prolonged delay. 58% of the major fires in shift working establishments were in modern buildings or in modern plant operated in the open and these contributed 66% of the losses in the shift working category of major fires. Only 22% of the fires occurred in pre-1914 buildings and 20% in those built between 1914 and 1939. Their contribution to the losses in shift working premises was 11% and 23% respectively.

77. All but two of the shift-working premises involved in major fires were engaged in industrial manufacturing and the great majority of them used or produced highly inflammable materials such as plastics, paper and textiles which, if ignited in bulk, could very quickly lead to a major fire. Unplanned events or accidents inevitably occur in manufacturing processes and can cause fires. On the

other hand, the amount of inflammable material actually being processed at any one time is not normally large and a number of people are usually on the spot when an accidental fire occurs. It is in storage areas where the bulk of inflammable material is to be found, but in these areas there is theoretically no reason why an ignition should occur. It is significant, therefore, that the same proportion (42%) of the major fires in shift working premises was contributed by manufacturing process and by storage area fires and the latter contributed much more (58%) to the fire losses than the former (35%). Fires in storage areas were caused by smoking materials, defective electrical heating and other apparatus and by general repair work involving the use of blow lamps and welding and cutting machinery. A further 11% of the major fires in shift-working establishments resulted from floors, ceilings, partitions, furniture, etc., being set alight by similar ignition causes not connected with the actual manufacturing process. These fires were responsible for only 6% of the total losses. The remaining 4% of major fires in this group resulted from unknown causes and contributed only 1% of the loss.

78. The remaining 103 fires (31%) causing approximately 32% of the total major fire loss occurred in premises which, while not operating on shift, were in operation at the time of the fire. 13% of these establishments were protected by some type of automatic fire protection device; six of them had sprinklers and seven automatic detectors. Three of the sprinkler installations did not operate and another was only partially effective. Two of the detectors did not function. Eleven of the establishments had some sort of private fire-fighting organisation. 46% of the fires in the group were in buildings wholly or partly built before 1914, 22% were in buildings built between 1914 and 1939 and 32% in modern buildings. The contribution of fires in old, medium age and modern buildings to total losses in this group of major fires was 38%, 11% and 41% respectively. A delay in discovery of at least 20 minutes was known or suspected in the case of 23% of the fires in premises which were in operation but were not on a shift basis. These accounted for approximately 20% of the losses in this group of major fires.

79. Fires caused directly by manufacturing processes or plant maintenance numbered 30% of the total of the group and were responsible for 32% of the losses. Fires in storage areas amounted to 48% of the total and contributed 50% of the loss. Ignition of building fabric and furnishings by causes not connected with the manufacturing processes accounted for the remaining fires and losses.

80. The conclusions we draw from this survey of fire losses are:

(*a*) Extension of the fire cover provided by the public fire-fighting services would not have more than a very marginal effect on fire losses.

(*b*) In premises not in operation round the clock a much greater use of well-maintained automatic fire detectors, and in some cases sprinklers, with alarm systems which automatically call the fire brigade could result in a major reduction of fire loss.

(*c*) Many old buildings fall far short of the standard of construction now demanded by building regulations applicable to new premises and every effort should be made to reduce this gap by stricter enforcement of the existing regulations, and by a refinement of the definition of use classes. This applies particularly to premises in which highly-inflammable materials are used and to buildings when there is a change of occupancy.

(*d*) Many factories and to a less extent commercial premises deal with materials and products of such high inflammability that, if these are ignited in sufficient bulk, a large or major fire will almost inevitably result unless immediate extinguishing action is taken. In respect of ignitions in such premises which originate in the course of the manufacturing process or plant maintenance, reduction in losses would seem to depend largely on better process planning and good management to keep down the quantity of inflammable material at risk at any one time, on improved design of plant and on training of operators in the action to be taken in case of fire.

(*e*) The places where most large quantities of inflammable material are found, however, are in warehouses, stores, reception, packing and despatch areas and waste accumulations. The most effective way to reduce the frequency of large and major fires in these areas would seem to be the greater use of sprinklers or other automatic fire-fighting devices which also give a direct warning to fire brigades.

(*f*) There appears to be a need for more regular and more rigorous inspection of electrical systems and apparatus, of fire detection and fire prevention devices and of fire-fighting equipment.

(*g*) A number of the major fires covered by the survey might have been avoided by better supervision of occasional repair and maintenance operations in non-production areas.

CHAPTER III

THE PRINCIPLES WHICH SHOULD GOVERN THE ORGANISATION OF THE FIRE SERVICE

NATIONALISATION VERSUS CONTINUATION OF LOCAL GOVERNMENT CONTROL

81. In considering the principles which should govern the organisation of the fire service, the first question calling for decision is whether the service should continue to be provided by local authorities or should become a national service as it was in the second world war.

82. Many sound arguments can be put forward for a nationalised fire service. With a single chain of command it would be relatively easy to divide the country into areas predominately on the basis of fire risks and communications and to serve these areas with fire brigades of viable and more uniform size. Appointments, promotion and training would be centrally controlled thus ensuring common standards of efficiency, more effective use of skilled manpower and a more uniform system of mobilisation and control of appliances in operations. Supply of appliances and equipment would benefit from bulk buying. Moreover, a nationalised fire service would include an organisation at the centre responsible for collating the experience of brigades, for operational research and other studies of all fire problems, and for forward planning and formulation of general policy.

83. Any consideration of the renationalisation of the fire service must, however, bear in mind two important factors. First, the position today is very different from that leading to nationalisation in 1941 when there were 1,625 fire brigades in Great Britain, many of them inefficient, undermanned and ill-equipped with few or no basic common standards. Most of the improvements introduced during the war with regard to standardisation of methods and equipment have been incorporated in the present organisation of the service under local government. Secondly, the work of the fire service is very different in war-time from what it is in times of peace. In the former case it is concentrated on large-scale fire-fighting operations requiring central direction to organise the rapid movements of large numbers of men and appliances from one part of the country to another, and it is the declared government intention to revert to nationalisation in the event of war. Under peacetime conditions, the fire service is a much more local matter and fire prevention in all its various forms is just as important as fire-fighting.

84. Fire prevention is not a matter for the fire service alone. It must collaborate closely and continuously with building regulation authorities and other local government and public services. The present organisation of fire brigades under local fire authorities provides effectively for such collaboration by personal contact between people of similar status at local level. Under the present system fire brigades also have the benefit of the administrative, legal and other services provided by other departments of the local authority. If the fire service were nationalised, special arrangements would have to be made to provide these

common services and for the contact and co-ordination required on fire prevention measures at local level. It is unlikely that these could be provided as economically as at present and at least doubtful whether they would work as successfully.

85. There is also a more general consideration which is by no means unimportant. It is an accepted part of the national pattern of public activity that responsibility for the provision and local administration of many important services should rest with local authorities, subject to a measure of control and guidance from the centre as regards national policy. Unless, therefore, any valid reason can be shown for an exception for a particular service, its administration should fall in with the national pattern of local government. There is, moreover, in many areas a genuine pride in the efficiency of the fire service among members of the local fire authority and of the public which, although it cannot be measured, is of undoubted value to a service in which *esprit de corps* makes an important contribution to efficiency.

86. The great majority of those giving evidence to us, including the Home Departments and the local authority associations, were strongly in favour of the retention of the present organisation of fire brigades under local authority control. We agree in principle and RECOMMEND accordingly, although we are strongly of the opinion that there are three important defects in the present system which need to be remedied. Many fire authorities' areas are too small to support viable brigade units with adequate rank structures and the necessary specialist posts and training facilities; the division of responsibility between some county and county borough fire authorities creates inconvenient boundaries in areas calling for unified fire cover; and the power and resources of the Home Departments to provide guide lines for brigades to promote the efficiency of the service are too limited. We set out below our suggestions as to how these problems may be overcome.

THE CASE FOR LARGER AND MORE UNIFORM FIRE AUTHORITIES

87. Almost all those who gave evidence to us or with whom we discussed the matter informally during our visits to brigades, believed that larger units of more uniform size than at present would make for greater operational efficiency. We reached quite early in the course of our inquiry the provisional conclusion that the future organisation of the fire service in England and Wales should be based upon a much smaller number of units than at present and that they should be more uniform in size. In Scotland the position is somewhat different since there are only 11 brigades, one for the City of Glasgow and 10 which cover the combined areas of the constituent fire authorities. Nevertheless, we were satisfied that the efficiency of the fire service in Scotland would be increased if the number of brigades were reduced. Further, we concluded, without fixing arbitrary limits on the size of brigades, that they should be large enough to provide an adequate establishment of senior posts to cover specialist functions and offer reasonable prospects of promotion, but preferably should not exceed a size over which the chief officer could keep in touch with his men and be in effective operational control as distinct from being largely an administrator. Further progress in our inquiry, particularly into operational efficiency, command structure, recruitment and training, confirmed us in these views.

88. Their advantage for rapid and effective mobilisation is the main operational argument for larger and more uniform areas. Men and appliances need to be

concentrated quickly and effectively wherever fire has to be fought. The location of an outbreak can never be known in advance, although zones can be drawn within which the likelihood and gravity of outbreaks will be greater or less. This being so, the larger the area protected by one brigade the greater will be the ability to plan fire cover and to mobilise and concentrate resources wherever they are needed without calling upon the services of a neighbouring brigade. Moreover, rapid and effective mobilisation is rendered more difficult where a part or the whole of one fire authority's area is situated within that of another authority, as where a county borough is wholly or largely surrounded by the area served by a county brigade. Sensible arrangements for mutual assistance between the fire authorities concerned as required by the Fire Services Acts minimise the problem. Nevertheless, in many areas where at present a large fire has to be attended by men and appliances from more than one brigade, it would be operationally more efficient if the men were all members of the same brigade, who had been trained together, who used the same type of equipment and who were directed by their own officers. Moreover, communications would be simplified. The sub-division of areas of high risk and common interest between several adjoining fire authorities, and the separation of a county town, which happens to be a county borough, from the county which surrounds it, necessitate a duplication of expensive control rooms and equipment and skilled staff for which there is no justification other than the existence of arbitrary boundaries with no relevance to the task of fire-fighting.

89. Under the existing organisation many brigades are in our opinion too small to be viable. Specialist functions such as fire prevention and training are necessarily carried out on a small scale under relatively junior officers. Opportunities for men to obtain experience of the full range of fire brigade activities in their own brigades are limited, as are opportunities for promotion. The small brigades are particularly handicapped with regard to training. Internal training facilities cannot be provided economically and there is difficulty in releasing officers and men for attendance at central training courses. One of the main advantages of the provision of larger and more uniform brigades would be that it would largely eliminate these difficulties. The creation of larger and more uniform commands would make it possible for all brigades to have specialist officers of appropriate high rank responsible for such matters as fire prevention and training. It would also provide the opportunity for men to gain experience of a wide range of fire matters and open up better promotion prospects within their own brigades.

90. We consider that the optimum size of a brigade would be one containing about 30 stations (two part-time stations being considered for this purpose to be the equivalent of one whole-time station) corresponding to a range of about 1,100 to 1,300 men. It would be sufficiently large to provide an adequate command structure, while not exceeding a size at which the chief officer could keep a high degree of personal touch with the officers and men under his command and could exercise the necessary degree of personal supervision of the brigade's fire-fighting operations. We recognise, however, that if all brigades were to contain about 30 stations, some brigade areas in the more sparsely populated parts of the country would be too large geographically for the chief officer to exercise the personal control and supervision which we consider essential. At the same time, there are other areas where a brigade of more than 30 stations would provide a more natural, integrated command. While we regard a brigade of some 30 stations as the optimum in areas where both our criteria are satisfied, we accept that

inevitably there must be other areas where brigades with fewer or more stations would provide a more acceptable organisation.

91. We refer in paragraph 84 to the close liaison which is necessary between local fire brigades and other local services. In other parts of our report we make proposals for further fire prevention measures which will lead to an even closer collaboration between the fire service and other local government departments, particularly those concerned with building regulations. It seems clear, therefore, that in any reorganisation of the fire service, and of local government generally, it would be desirable that responsibility for the provision of the fire service and for the enforcement of the building regulations and other fire prevention measures related to public safety should be in the hands of the same authority. Such an arrangement would facilitate the necessary consultation between the departments concerned, ensure that all the relevant professional skills were brought to bear and that advice, where necessary, was reconciled. Moreover, it would be convenient for architects, engineers and building owners or occupiers who have to comply with the requirements of fire prevention legislation. Where this combination of functional responsibilities can be achieved in a local authority which has sufficient resources to provide a viable fire brigade according to the criteria which we have set out above, we consider this to be the ideal organisational solution. However, where a local authority responsible for building regulations and other fire prevention measures is too small to support a viable fire brigade, we RECOMMEND that it should be combined for fire service purposes with one or more other authorities. We consider that the benefits to be derived from larger fire brigades are so important for fire brigade efficiency that they should not be sacrificed, and that the close contact required on fire prevention matters between the fire service and the building regulation and other local authority services could still be maintained in this way with relatively little inconvenience.

DEGREE OF CENTRAL PARTICIPATION

92. The proposals of the Royal Commissions on Local Government in England and Scotland[1] for replacing existing local authorities by fewer and larger authorities contemplate that if such authorities are established their resources will enable central Government to leave them with a greater power of local decision than at present. Whether Parliament adopts these proposals or not, the outcome seems likely to be some material reduction in the number of the present authorities and a renewed emphasis on their greater freedom from central control. Any proposal, therefore, for extending the role of central Government in the running of the fire service may appear to oppose this tendency toward greater local autonomy. Nevertheless, as we state elsewhere, there are many matters in which we believe that the present service suffers from the lack of clearly-defined guiding principles which can effectively be established only at national level by a team of people, including specialist and professional staff, working in consultation with representatives of the local authorities and other interested bodies. We refer to this in greater detail in Chapter IV.

1. Cmnds. 4040 and 4150.

CURRENT PROPOSALS FOR THE RE-ORGANISATION OF LOCAL GOVERNMENT[1]

93. Our terms of reference invite us to consider only the principles which should govern the organisation of the fire service. We feel bound, however, to consider briefly the relation of these principles to the proposals for local government reorganisation put forward in the Reports of the Royal Commissions on Local Government in England and in Scotland, and in the White Paper on Local Government in Wales[2].

England

94. We are glad to know that the majority report of the Royal Commission on Local Government in England proposes the setting up of substantially fewer local authorities with fire service functions (three metropolitan and 58 unitary) than exist at present and that all 61 authorities would have fire service and building regulation functions. We welcome the reduction in the number of fire authorities which would result from the Royal Commission's proposals, but an analysis of the authorities proposed reveals that some of them would still be well below the size which we have recommended for an efficient brigade. We understand from information provided by the Home Office at our request that some 15 unitary areas would have brigades with 10 or fewer whole-time or other equivalent stations and a further 23 would have 15 or fewer stations. We accordingly RECOMMEND that those unitary authorities which would be too small for fire service purposes should be combined with other authorities to provide brigades of a more uniform viable size. This should result in the number of brigades in England being about 40. We do not favour the creation of joint committees of the individual fire authorities for this purpose because they would have no power to levy a rate or borrow money and such evidence as we have suggests that for these reasons they work less smoothly than combined fire authorities. Where combinations of unitary authorities are necessary, therefore, we RECOMMEND the formation of combined fire authorities. We leave open the question of the legislative arrangements necessary for achieving such combinations. We hope that provision for the purpose would be made in the legislation which will be required for the setting up of whatever authorities may eventually result from the Royal Commission's proposals. Should this not prove practicable, however, we RECOMMEND that the Secretary of State be given power compulsorily to combine fire authority areas, without limitation on the size of the authorities which may be so combined which exists at present under section 6 of the Fire Services Act 1947.

95. The Royal Commission recommend that in the three metropolitan areas the metropolitan authorities should have fire service functions. We have drawn attention earlier to the operational advantages of one authority providing fire cover over as large an area as is practicable. Although each metropolitan area will provide brigades larger than the optimum we recommend in paragraph 90, the metropolitan district authorities contained in each area would be too small to support viable separate fire brigades and their boundaries would be largely artificial for fire cover purposes. Moreover, we note that the metropolitan authorities would be responsible for the building regulations. All the arguments,

1. The Government's White Papers on Local Government in England (Cmnd. 4276) and in Glamorgan and Monmouthshire (Cmnd. 4310) were published after we had completed our review.

2. 1967 Cmnd. 3340.

therefore, point to the metropolitan authorities rather than the metropolitan district councils having responsibility for fire. We therefore accept with some reluctance brigades of the size which would result from the creation of the new metropolitan areas. Because of their size, each brigade would have to be organised into separate commands of appropriate size for fire-fighting purposes, on the lines adopted by the London fire brigade following the creation of the Greater London Authority in 1965.

London

96. The London fire brigade with some 118 stations is much larger than the optimum size of brigade we have in mind. The considerations, however, which apply to the provision of fire cover in the proposed new metropolitan areas apply with even more force to Greater London. Fire cover is provided over an area which is almost wholly urban and there are obvious operational advantages in one brigade providing fire cover for the whole area. Moreover, as only a few years have passed since the large-scale reorganisation of the London brigade we consider that it should have further time to absorb the readjustments consequent on the reorganisation before consideration is given to the need for any change.

Wales

97. The White Paper on Local Government in Wales, which was published in 1967, proposed that there should be five counties and three county boroughs in Wales and that their councils should have broadly the same functions as those of the existing county and county borough councils. The Government later announced that it was their intention to proceed on the basis of six instead of five counties and subsequently gave an undertaking that the proposals would be considered further in the light of the Report of the Royal Commission on Local Government in England. We have therefore considered the pattern at present proposed for Wales against the criteria which we have set out for the optimum size of brigades. There are at present 14 fire brigades in Wales. We are satisfied that they should be fewer in number and more uniform in their rank structure. We consider that they should be reduced to about five. We have already stated that we wish to eliminate the anomalous situation which occurs where the area served by one brigade is wholly or largely surrounded by that of another. Accordingly we do not think that separate and comparatively small fire brigades should be provided for any of the proposed county boroughs. We RECOMMEND that these should be combined with the surrounding county councils for fire service purposes on the lines we have proposed in paragraph 94 for the combination of unitary areas in England.

Scotland

98. The recommendation of the Royal Commission on Local Government in Scotland would place responsibility for the fire service on the proposed regional authorities. This would have the effect of reducing the existing number of brigades in Scotland. Responsibility for enforcing the building regulations would, however, rest with the proposed district authorities which would be too small for fire service purposes. Although we regard the provision of authorities combining fire and building regulation functions to be desirable where this can be achieved, as we

have explained in paragraph 91, the provision of viable fire brigade areas is the more important consideration for future fire brigade organisation. We therefore welcome the Royal Commission's proposals, which would both reduce the number of brigades and dispense with the need to form combined fire brigades in Scotland. For the reasons which we have given in paragraphs 87 and 90, however, we have reservations about the size of the West Region in line with those which we have expressed about the proposed Metropolitan areas in England.

INTERIM ARRANGEMENTS

99. We recognise that the future of the fire service is but one element, and a relatively minor one, in the comprehensive review of local government now in train. We realise, too, that this review raises contentious issues and that it may take some time before comprehensive legislation determining the future of local government has been enacted. Although in these circumstances it seems unlikely that separate legislation will be put forward to deal with the reorganisation of the fire service alone, we consider that the regrouping of the service into larger units in England and Wales is vital to its efficiency. Pending the comprehensive reorganisation of local government we urge fire authorities in England and Wales to use their existing powers under the Fire Services Acts to combine in order to create larger brigades as the opportunity occurs, for example, when a chief fire officer retires.

CHAPTER IV

THE RELATIONSHIP BETWEEN THE CENTRAL GOVERNMENT AND LOCAL FIRE AUTHORITIES

INTRODUCTION

100. We have given our reasons in Chapter III for recommending that the service should continue to be administered by local authorities. However, we have stressed that far too little is done at present to analyse continuously the problems of fire and of fire service management which affect Great Britain as a whole, and to formulate general policy for the guidance of fire authorities. We consider it essential that the position should be rectified by giving responsibility for this work to some organisation at central government level. We are fortified in this view by the evidence we have received from a number of witnesses.

101. The local authority associations and the Chief Fire Officers' Association on the other hand, while confirming that the present relationships between the Home Departments and local fire authorities are harmonious, advocated strongly that there should be no extension of the powers of control exercisable by central Government. Unlike other services entrusted to local authorities which have been developed by the local authorities themselves in co-operation with the central government departments concerned, the present-day fire service was first developed as a nationalised organisation. Local authorities have been responsible for a nation-wide service on a common pattern only since 1948. It is therefore very understandable that fire authorities in particular should resist any erosion of their local autonomy, and should be apprehensive that any form of further involvement in fire matters at the centre might have this effect.

102. We cannot emphasise too strongly that we have no wish, and see no need, to reduce the freedom of action of local fire authorities. This would be quite contrary to present trends, which would be expected to become even more pronounced if the recommendations of the Royal Commissions on Local Government and, indeed, our own recommendations for larger fire authorities, are accepted. Our objective is to ensure that data on all fire problems are adequately co-ordinated and studied to give a basis for general policy guidance to fire authorities and, in our view, this work can only be done effectively by a team of people, including specialists, operating centrally. In formulating our detailed proposals we have given the most careful and sympathetic attention to the apprehensions of local authorities, and we are confident that, if our proposals are adopted, they will not lead to any erosion of local autonomy but will instead prove of considerable help to fire authorities in carrying out their fire service management functions.

EXCHEQUER GRANT

103. The view was expressed to us (not supported by the Home Departments or the local authority associations) that there should be a return to a specific grant as a method of providing financial assistance to fire authorities from the Exchequer, in place of the existing rate support grant. Under such arrangements a fixed

percentage grant would be paid to fire authorities towards "approved" expenditure, and this would mean a return to the former system of detailed control of fire authorities' expenditure by the Home Departments, which in our view would be a retrograde step. Rate support grant gives local authorities discretion to use the Exchequer assistance so as to finance the whole range of their services, without detailed central government supervision and control. The withdrawal of a particular service from the rate support grant would detract from its viability for the other services which it covers. Moreover, we have received no evidence to suggest that local authorities, in the exercise of their discretion to allocate their resources to the best advantage, have acted to the detriment of the fire service. We therefore reject the proposition that the fire service should become a specific grant service and RECOMMEND that it should continue to be partly financed through the rate support grant system.

CENTRAL FIRE BRIGADES ADVISORY COUNCILS

104. The Act of 1947 required the Home Secretary and the Secretary of State for Scotland to set up Central Fire Brigades Advisory Councils for the purpose of advising on matters arising from the operation of the Fire Services Acts. The constitution of the Advisory Councils, their responsibilities and how they operate are described in Chapter I. Each of these consultative bodies provides a forum in which matters affecting the fire service of concern to both employers and employees and to the Home Departments can be jointly discussed by representatives of all three. We recognise that, in a service provided and administered by many different authorities and served by two staff associations and a trade union, such a forum is essential and we RECOMMEND that there should be no change in the Central Fire Brigades Advisory Councils, apart from changes in their constitution which may be necessitated by the reorganisation of local government.

DEFICIENCIES OF EXISTING CENTRAL SERVICES

105. The Central Fire Brigades Advisory Councils and their specialist sub-committees have undoubtedly played a most important role in considering and developing policy on specific fire problems brought to their attention by fire authorities, by officers and men of the fire service and by the Home Departments. The Central Fire Brigades Advisory Councils do not, however, have the facilities to collate the vast and constantly growing amount of experience and knowledge on fire-fighting and fire prevention spread over the large number of fire authorities, or to analyse and study such factors as fire incidence, fire losses, recruitment, training, manpower planning, duty systems and standards of fire cover. This work, the results of which are essential to efficient management of the fire service, requires full-time staff including appropriate specialists, and cannot be done by committees whose members can devote to it only a small part of their time.

106. Indeed, there is at present no organisation with specific responsibility for the collation of existing information for the study of basic fire problems, and for the provision of managerial services and guidance to the fire service. The Home Departments, as explained in Chapter I, have only very limited power and responsibility for matters concerning the efficiency of the fire service. In practice, and particularly through the Fire Service Inspectorate, they have been able to

exercise more influence and provide more guidance to fire authorities than their limited powers would suggest. Nevertheless, they can meet only a relatively small part of the total needs. Operational research in connection with fire is carried out, in our view to an inadequate extent, by the Fire Research Station and recently by the Scientific Advisory Branch of the Home Office. Other kinds of research and testing are centralised at the Fire Research Station and, as explained in Chapter XVIII, suffer from the disadvantage of being relatively isolated from other fire activities and in our view need to be extended in volume.

RECOMMENDATIONS FOR AN ENLARGED AND STRENGTHENED HOME OFFICE FIRE DEPARTMENT

107. We RECOMMEND that these basic studies of fire problems should be carried out by an enlarged and strengthened Fire Department at the Home Office. We also RECOMMEND that this Department should have administrative and functional responsibility for the training colleges, for operational research on fire-fighting and fire prevention matters and for other forms of research to which we refer in Chapter XVIII. The duties to be performed by this enlarged department are described in more detail in paragraphs 111 to 115.

THE POWERS OF THE SECRETARIES OF STATE

108. To make these arrangements effective, we RECOMMEND that the Home Secretary and the Secretary of State for Scotland be given a specific statutory responsibility for promoting the efficiency of the fire service throughout Great Britain and for providing research and management services, both to assist in the discharge of this responsibility and for the guidance of local authorities in the performance of their statutory functions. The Secretaries of State should in addition have power to require fire authorities to provide on request statistical information and data on fire fighting, fire prevention, fire research and fire service organisational matters. They should also have powers to conduct informal inquiries into the causes and effects of fires which have special features of interest, additional to their powers under section 33 of the Fire Services Act 1947. At present H.M. Inspectors of Fire Services are responsible for obtaining information as to the manner in which fire authorities are performing their functions under the Fire Services Acts and to technical matters relating thereto. We RECOMMEND that this power should be widened to cover the fire prevention functions of fire authorities arising under other statutes. We further RECOMMEND that a mandatory duty should be placed on the Inspectorate to inspect all fire brigades and report to the Secretaries of State on the efficiency with which fire authorities discharge the whole range of their statutory functions. Our recommendations in this paragraph are without prejudice to the Secretaries of State's existing powers under the Fire Services Acts to prescribe standards of training and design and performance of equipment, qualifications for appointments and promotion, including the approval of the appointment of chief officers, to approve reductions in establishments or fire cover and to regulate pension and disciplinary matters. We RECOMMEND that these powers be retained.

THE ORGANISATION OF THE ENLARGED HOME OFFICE FIRE DEPARTMENT

109. It is not for us to define the precise staff structure which the Home Office should set up to provide the management services and to undertake the review and formulation of national policy which we recommend. But it is clear that more specialist staff will be required for this work. We RECOMMEND that the proposed new organisation should be fully integrated with the existing staff and divisions of the Home Office Fire Department and should serve also the much smaller Fire Department of the Scottish Home and Health Department. We wish to emphasise that, if this work is to be effective, it must be undertaken by men of high calibre with the appropriate professional training and experience to ensure that they have the confidence of the fire service and fire authorities. We doubt whether sufficient men with these qualities are available in the existing Home Office Fire Department or the fire service. Means will therefore have to be found for their recruitment from other sources and for their subsequent retention. This will involve questions of salary, status in relation to established civil servants, and prospects of promotion both in the Scientific Officer Class and the Administrative Class of the government service. We appreciate that these are difficult issues, but we firmly believe that the success of our proposals is contingent on their solution.

110. Although the enlarged Fire Department will be responsible to the Home Secretary, we RECOMMEND that its studies and recommendations should always be referred for consideration to the Advisory Councils and, where necessary, their appropriate committees and that the Councils' views should be taken into account by the Secretaries of State before the recommendations are acted upon. The Fire Department with its additional resources will also be in a better position to provide data and information to the committees of the Advisory Councils and thus give greater impetus and depth to their work. In this way, both the Fire Department and the Central Fire Brigades Advisory Councils will be able to initiate the long-term planning for the service which is required, and at the same time provide the necessary specialist backing for the consideration of current technological problems by the specialist committees of the Advisory Councils. We RECOMMEND also that the Fire Department should be free to set up working parties on particular technical problems as the need arises and to invite fire brigade officers or any other persons with specialist knowledge of the subject to serve on them. *The membership of such working parties should not have to reflect* the membership of the Advisory Councils, but should be drawn from those members of brigades, subject to the consent of their employing fire authorities, who are most suitable for the work, as well as from industry, commerce and insurance interests.

FUNCTIONS OF THE ENLARGED HOME OFFICE FIRE DEPARTMENT

111. The additional functions which we consider the enlarged Home Office Fire Department should carry out arise from considerations which are discussed in other parts of our report. They fall under the broad headings of manpower planning, fire prevention and research and development, all of which involve operational research and compilation and analysis of statistics. For convenience we list the more important of their functions under these headings in the following paragraphs.

MANPOWER PLANNING

112. The Fire Department should provide an advisory service in all matters relating to manpower requirements, recruitment, training and promotion. It is important that manpower establishments should, both from the point of view of costs and the difficulties we envisage in recruitment, be kept as low as possible consistent with efficiency. There will, therefore, be a need for continuous detailed analyses of the effect on establishments of rising fire incidence, increasing fire prevention duties and provision for training both in brigades and centrally. Regular review of the appropriateness of current duty systems and standards of fire cover will also be needed. The reasons for, and ways of reducing, premature wastage require continuous study. In order to determine policy on the educational and other qualities of recruits, detailed job analyses of the duties of various ranks in the fire service will be needed. It is desirable that more research, such as we initiated at the West Riding Training School, should be undertaken into the effectiveness of recruits with varying entry qualifications and experience. Initiation of these studies should be the responsibility of the enlarged Fire Department, as should the initiation of publicity directed at attracting recruits. The Fire Department should co-ordinate all aspects of the new training provisions to which we refer in Chapter VIII. The need for officers, particularly the more senior ones, should be foreseen well in advance and there should be a procedure for ensuring that men promoted are the best available over the country as a whole. We refer to this and to the need for a national register in more detail in Chapter VIII.

FIRE PREVENTION

113. We envisage that the enlarged Home Office Fire Department should provide an advisory service on all the fire prevention activities of fire authorities and fire brigades. It should be responsible for the content and compilation of the United Kingdom Fire Statistics, and should carry out a continuous analysis of their data in order to identify measures for reduction of fire incidence and loss of life and property. It should be responsible for disseminating this information to brigades and to other bodies concerned and should have power to hold informal inquiries into fires of particular interest.

114. Since many other organisations, both governmental and otherwise, are involved in fire prevention there should be some mechanism to ensure that there is appropriate co-ordination of policy and technical matters and of methods of approach to particular problems. As we recommend in Chapter XIV, the Home Office Fire Department should set up and maintain the necessary consultative machinery for this purpose, and should also give support to the efforts of all voluntary bodies concerned with fire prevention, including the new association of industrial and commercial interests which we recommend in Chapter XVII. We would expect the Department to be represented on all the relevant committees dealing with fire prevention matters, including the committees of the British Standards Institution concerned with codes of practice and standards. The Department should also have overall responsibility for initiating and co-ordinating the various fire prevention publicity measures which we recommend in Chapter XVII.

RESEARCH AND DEVELOPMENT

115. We recommend in Chapter XVIII that the Home Office Fire Department should become responsible for co-ordinating all research and development relating to fire and for carrying out a major part of it, including operational research and statistics. It should be the responsibility of the Department to assess priorities for research on fire-fighting and fire prevention problems, including the incidence of fire, fire fatalities and fire losses; to initiate target research on these matters; and to ensure that the results of research are disseminated to fire authorities, fire brigades and other interested organisations, in a form in which they can be clearly understood. The Department should also maintain close liaison with manufacturers on developments in fire-fighting equipment, fire-fighting techniques and fire prevention matters. In addition to the actual conduct and co-ordination of research, the Department should where necessary contract out research projects to other institutions such as universities and polytechnics.

THE FIRE SERVICE INSPECTORATE

116. At present all the specialist professional staff of the Home Office Fire Department are members of the Inspectorate. This will no longer be appropriate with the establishment of the enlarged Fire Department on the lines we have proposed, because it will be necessary for the Fire Department itself to contain specialist professional staff. The Inspectorate will remain as at present separate from the Divisions but will in future concentrate on their inspectorial functions, which should cover the efficiency with which fire authorities carry out the whole range of their statutory functions, including fire prevention. Some strengthening of the Inspectorate will be necessary for this purpose. Any existing specialist staff of the Inspectorate, however, not employed on brigade inspections should be integrated with the Divisions of the Fire Department.

117. At present, the Inspectorate provide the only channel for the two-way passage of information between the Home Departments and fire brigades. We wish the Inspectorate to continue to be regarded as technical colleagues and advisers and not just external examiners, and to continue to play an important part in providing this communications link. With the new organisation which we have recommended, however, they will cease to provide the sole means of communication. Members of the enlarged Fire Department will themselves need to have direct communications with, and as necessary visit, individual brigades.

REPORTS OF H.M. INSPECTORS

118. We understand that the Secretaries of State take the view that reports of H.M. Inspectors are confidential, and that it is not, therefore, the practice for the reports or their contents to be revealed to fire authorities. If H.M. Inspectors are to be seen as technical colleagues and less as external examiners, and if their duties are to cover all aspects of fire authorities' activities, we consider that this practice should be changed. We RECOMMEND that copies of H.M. Inspectors' reports to the Secretaries of State should be sent to the fire authorities concerned.

CHAPTER V

FUNCTIONS OF THE FIRE SERVICE

119. The functions of the fire service fall into three categories:—

(*a*) the extinction of fires and the protection of life and property in case of fire, which derive from the statutory duties placed on fire authorities under the Fire Services Acts 1947-1959;

(*b*) fire prevention, which derives from the multiplicity of fire prevention duties placed on fire and local authorities generally under legislation dealing with public safety; and

(*c*) special services, which cover a wide variety of accidents or other emergency situations in which assistance is sought from fire brigades, and on which fire authorities are empowered to employ the brigade under section 3 of the Fire Services Act 1947.

THE EXTINCTION OF FIRE AND THE PROTECTION OF LIFE AND PROPERTY IN CASE OF FIRE

120. The relevant statutory provisions are section 1 of the Fire Services Act 1947, which requires a fire authority to make provision for fire-fighting purposes; section 2, which provides for arrangements for mutual assistance between brigades; section 3, which empowers a fire authority to employ their brigade outside their area; and section 13, which requires them to take all reasonable measures for ensuring an adequate supply of water for fire-fighting.

121. Section 1 of the Act, to which we have referred in greater detail in paragraph 10, requires a fire authority to maintain a brigade of sufficient strength to meet efficiently all normal requirements, as distinct from one capable of dealing fully with any isolated high risk within the area. Such a risk is taken into account in fixing the fire cover for the area as a whole, and in the event of a fire the maximum first attendance is provided consistent with available resources. Nevertheless, the management of the isolated risk have to realise that they are not fully covered and have to consider taking some steps themselves, for example, to ensure that adequate water supplies are available and, possibly, to install voluntary fire prevention and first-aid fire-fighting arrangements. We received no evidence to suggest that the present arrangements are unsatisfactory.

122. We received no evidence to suggest that the other statutory provisions set out in paragraph 120 give rise to difficulty, or that the fire service's functions under them should be changed. Moreover, as we have pointed out in Chapter III, the larger and more uniform size of brigades which we recommend should facilitate the more effective planning of fire cover and mobilising of fire-fighting resources over wider areas of the country. We accordingly RECOMMEND that there should be no change in the existing statutory provisions from which the fire service

derive their responsibility for extinguishing fires and protecting life and property in case of fire.

123. The present and future fire prevention roles of the fire service are dealt with fully in Chapters XIII and XIV.

SPECIAL SERVICES

124. We have explained in paragraph 32 that no duty is laid upon a fire authority to provide a rescue service except in a situation involving fire or risk of fire. Fire authorities have, however, a discretionary power under section 3(1)(*e*) of the Fire Services Act 1947 to employ their brigade or equipment for purposes other than fire-fighting. While they are precluded from making charges for fire-fighting purposes, they may make such charges as they think fit for services rendered under section 3(1)(*e*). It is the present practice, with which we agree, to make charges only for special services not involving public safety.

125. Special services are mainly concerned with:—

(*a*) local emergencies, such as road accidents, and rescue of persons trapped in buildings or other precarious situations;

(*b*) major disasters, such as Aberfan, the Torrey Canyon incident and the East coast floods in 1953;

(*c*) domestic incidents, such as leakages of water in flats or houses and persons locked in or out of premises; and

(*d*) services provided by prior arrangement, such as the emptying of swimming pools and filling of water tanks.

126. The most important special services are those in paragraph 125(*a*) above, and inevitably the fire service will continue to be seriously involved with them because it is the only organisation which can respond rapidly to an emergency call with rescue equipment and men trained in its use. The position of the fire service is, however, somewhat anomalous in that its response to rescue calls is discretionary; there is no statutory provision for additional establishment or special equipment required over and above that needed for fire-fighting, or for legal immunity for entry into premises other than for fire-fighting.

127. It was suggested to us in evidence that, where fire brigades are called to motorway accidents, financial assistance should be given by the central Government towards the cost of the men and appliances which are needed for road accident work, especially since the majority of persons involved in motorway accidents are passing through and are not necessarily contributing by way of rates to the cost of the service provided in the area where the accident occurred. We can find no grounds for supporting this proposal. As the rate support grant provided by the central Government to local authorities is related to their rate-borne expenditure, no additional contribution appears to be called for.

128. Fire authorities have discretion under section 3(1)(*e*) of the Fire Services Act to use equipment provided for fire-fighting purposes for special service calls. While most equipment provided for general rescue work in fires is suitable for such special service operations, the increasing calls made upon brigades to rescue persons in road accidents have made it necessary for fire authorities to provide

additional equipment for the purpose, and doubts have been raised as to the adequacy of their powers under the Fire Services Acts to purchase such equipment. We note that the Royal Commission on Local Government in England recommended that main authorities should have a general power to spend money for the benefit of their areas and inhabitants, additional to expenditure on the services for which they have statutory responsibility (paragraph 323); and that the Royal Commission on Local Government in Scotland recommended that local authorities should possess a general competence making it possible for them to act outside the cover of a specific enabling statute where the circumstances seem appropriate (paragraph 640). Should Her Majesty's Government implement these recommendations, fire authorities would have power to purchase equipment for special service calls. If, however, the Royal Commissions' recommendations are not implemented, then we RECOMMEND that a fire authority's powers to purchase equipment for fire-fighting purposes should be extended to purposes other than fire-fighting on which the authority consider it suitable to employ the brigade.

129. Under section 30 of the Fire Services Act 1947, a member of a fire brigade is empowered to enter premises for fire-fighting purposes without the consent of the owner or occupier. It has been represented to us that, as no similar powers exist to cover a fireman's action on a special service call, firemen are technically liable to prosecution if they break into premises in the course of performing a service other than for fire-fighting purposes. While no problems normally arise where there is a risk of fire or where the service is of a humanitarian nature, brigades are sometimes faced with a difficult decision, for example, if they have to break into a flat to stop the leakage of water into the flat below or to help persons locked in or out of premises. We RECOMMEND that this situation be rationalised and that firemen's powers of entry for fire-fighting purposes should be extended as appropriate to cover special service calls.

130. It was common ground among those who gave evidence to us that since firemen were being used increasingly to rescue persons trapped in road accidents and other special service calls of a humanitarian nature, they should be given adequate training to equip them to carry out this work. We are glad to note that since early in 1968 courses for fire brigade instructors in the use of road accident equipment have been run at the *Fire Service Technical* College. We welcome this development.

131. The number of special service calls attended by brigades has risen steadily over the years from 25,107 in 1958 to 64,412 in 1968. In particular, there has been an increase in calls to rescue persons trapped in road accidents. In view of this growth, it has been suggested to us in evidence that the fire service's position with regard to rescue work should be rationalised by an alteration of the law to place a duty on fire authorities to provide such a rescue service and to train men and to provide equipment for it. In that event the name of the service might be changed to "fire and rescue service". At present, brigades respond to calls at their discretion and only when they have cause to believe that there is a genuine emergency. We were informed that even under these arrangements a high proportion of attendances is subsequently found to have been unnecessary. With an obligation to respond to all calls, the number of attendances would increase enormously and

fire brigade establishments would almost certainly have to be increased to avoid dilution of fire cover. Most of those who gave evidence to us were against placing a statutory duty on fire authorities to provide a rescue service and were in favour of maintaining their statutory discretion whether or not to respond to special service calls.

132. We have referred in Chapter II to the rising incidence of fires, of loss of life in fire and of fire damage. In our view all members of the fire service should be primarily engaged with these problems. It would be a waste of skilled fire service manpower for the service to be required automatically to attend all accidents, and we consider that they should only respond to calls where the necessary skills and equipment cannot be obtained quickly from other sources. We were impressed, for example, by the high ratio of emergency calls to fire calls made upon brigades in Switzerland and Germany, where the public fire service provides an emergency service. In Zurich the brigade attended 600 fire calls and answered about 1,100 special service calls each year and in Cologne the brigade answered 1,600 fire calls and 13,000 special service calls in 1967. Moreover, we have stressed in Chapter II the need to contain the rising cost of the fire service. We consider that a statutory requirement for the fire service to provide an emergency service would place an unnecessary and expensive burden on fire authorities. For these reasons, therefore, we are not in favour of placing a statutory duty on them to provide a rescue service or of changing the name of the fire service to fire and rescue service, although we accept that the service should continue as hitherto to carry out rescue work and other special services of a humanitarian nature, which require its special skills and equipment. We accordingly RECOMMEND that fire authorities should continue to have statutory discretion to employ their brigades on such special service calls.

133. It has been suggested to us that the fire service should provide a national emergency organisation to deal with such disasters as Aberfan, the East coast floods in 1953, the Torrey Canyon incident, major train disasters and air crashes. We can find no grounds for supporting this proposition. No two major emergencies are ever alike and, as they cannot be foreseen, it is a matter for the local authority concerned and the police to take whatever action is necessary in the circumstances of the particular case. It would clearly be quite impossible for the fire service to equip and train itself for every possible emergency. When, for example, firemen rescue people trapped in a train disaster, it is the railway authorities who provide the cranes and other special apparatus which may be needed and the trained personnel to operate them. In other disasters bulldozers and other types of apparatus with which the fire service is not equipped are frequently required. In our view, the only way of meeting these problems when they arise is for each local authority to have a predetermined plan as to how they would deal with specific disasters, which should include arrangements for obtaining necessary heavy rescue equipment and its operation. Most local authorities have made such emergency plans, and we RECOMMEND that no change be made in the existing arrangements under which fire brigades co-operate in the formulation of such plans and also respond to whatever requests are made when an emergency arises. When disasters occur on a scale requiring the mobilisation of the fire service from distant parts of the country, we are satisfied that, as on past occasions, it is well within the capabilities of an efficient peacetime fire service to mobilise appliances and men and move them to the stricken area as they are needed.

134. With regard to other special services, most of which are by prior arrangement, we were informed that many of them could be undertaken equally well by contractors. We consider that fire brigades should accept such work only in exceptional circumstances. The generality of special services by prior arrangement should be undertaken by fire brigades only when their special skills and equipment are essential and then only with charges which are fully economic. We take this view because we consider that the time of firemen could be better employed on training or fire prevention, particularly in the light of the recommendations on these matters which we make later.

FIRE AND AMBULANCE SERVICES

135. It has been represented to us that there would be certain advantages in combining the arrangements for controlling the fire and ambulance services in England and Wales, to facilitate their deployment at road and other accidents in which persons are trapped and have to be rescued. We understand that arrangements for a degree of combined control of the fire and ambulance services obtain at present in 21 fire authority areas in England and Wales. In Scotland there are no such arrangements because the ambulance service is organised nationally. The future organisation of the ambulance service is closely linked with the Government's current review of the provision of a unified health service, and whether its organisation should be within or outside a reformed system of local government. These wider issues go far beyond our terms of reference but we thought it appropriate to consider whether there would be operational advantages, if the ambulance service remained under local government control in England and Wales in the future, in combining the control and administration of the fire and ambulance services.

136. We were informed that the preponderance of ambulance work consists of journeys to and from hospitals. Only a small proportion is concerned with road and other accidents and at most of these fire service help is not required. Moreover, we have agreed that fire brigades should continue to respond to accident calls only when they have reason to believe that there is a genuine emergency, and have recommended that the fire service should not have a statutory responsibility for providing a general rescue service. We have already expressed the view that all members of the fire service should be primarily engaged on fire-fighting and fire prevention duties, and we consider that the chief and other senior officers of the brigades of the future should be fully occupied in running the fire service. We can see no good reason for their having additional responsibility for organising an ambulance service and its control arrangements, which are mainly related to the work of the hospital service. Should the ambulance service, therefore, continue to remain under local government control in England and Wales, we RECOMMEND that control of the fire and ambulance services should not in future be combined and that existing combined arrangements should be phased out as the opportunity occurs with the reorganisation of fire authority areas which we propose in Chapter III.

FIRE-FIGHTING AT SEA

137. Fire authorities have no statutory responsibility for fire-fighting outside their own boundaries. Where a fire brigade attends a fire at sea, it does so in the

exercise of the fire authority's discretionary powers. It was suggested to us in evidence that the fire service's responsibility for fighting fires at sea should be more clearly defined; that with the prospect of larger brigades special training and equipment provision should be made by those brigades with coastal boundaries; and that a special ship fire-fighting school should be established to provide instruction in ship fire-fighting.

138. We were informed that a Joint Working Party of the Central Fire Brigades Advisory Councils considered the problems of fire-fighting at sea and recommended in 1966 that brigades should respond to calls for assistance at sea where human life was endangered; that all fire authorities with coastal boundaries should decide whether they were willing to send members of the brigade to fires at sea outside their area; and that if so appropriate contingency plans and training provision should be made in consultation with other life-saving services. We understand that most fire authorities with coastal boundaries have implemented these recommendations.

139. We think it appropriate that fire brigades should be prepared on request to assist at fires at sea where human life is in danger, and that the necessary contingency plans should be made for this purpose. We understand that the incidence of such calls for assistance is low (in the six years preceding the Central Fire Brigades Advisory Councils' examination of the problem 47 attendances only were made in the whole of Great Britain). We can find no grounds from the evidence we received for concluding that any changes in the existing statutory position are called for or that fire authorities should incur more than minimal expenditure in making necessary contingency plans on training or on the provision of specialised equipment for off-shore fire-fighting. We understand also that facilities for training in ship fire-fighting techniques will be provided at the Fire Service Technical College. We RECOMMEND that minimal contingency plans should be made for off-shore fire-fighting.

AIRPORT FIRE BRIGADES MAINTAINED BY LOCAL AUTHORITIES

140. The standards of fire cover to be provided at each civil airport are laid down by the Board of Trade in accordance with internationally agreed standards. The requirements are included in the licence for the airport and the brigade provided for the purpose is subject to annual inspection by the Board of Trade. The latter maintains an airport fire service training school, where training in airport fire-fighting techniques is provided and certificates of competence are issued to airport firemen of supervisory grades. The arrangements for providing fire cover at each airport in accordance with the required standard are, however, a matter entirely for the licensee of the airport. We understand that at all local authority airports, except Liverpool and Leeds/Bradford, fire cover is provided by a separate civilian fire brigade. At Liverpool and Leeds/Bradford, however, the airport is fully integrated with the public fire service, which provides the necessary airport cover.

141. We asked a number of local authorities who maintain separate airport fire brigades why they do so. They take the view generally that an airport fire brigade is an industrial unit whose work differs in type and extent from that of the public fire service. An airport fire brigade is seen as an integral part of the airport

organisation, working in close liaison with the air traffic control staff, the operating companies, freight agents, fuel companies and other units at the airport. Airport firemen have to have an intimate knowledge of the airport, its organisation and air traffic control procedures, together with a sound knowledge of different types of aircraft which is best gained by the performance of other airport duties. They carry out a wide range of duties additional to their fire and rescue responsibilities, such as snow clearance, frost-precaution measures, bird dispersal, provision of emergency lighting and assistance with unserviceable aircraft on runways, which might be inappropriate for members of the public fire service. Airport firemen are trained in the specialised techniques of fire-fighting in aircraft, in aircraft rescue techniques and in the use of specialist appliances. If the public fire brigade were to provide full-time fire cover at airports, additional staff would have to be employed to perform the extraneous duties undertaken by airport firemen. Integration of the airport with the public fire brigade, we were told, would lead to staffing problems, because airport firemen are on different pay and conditions of service and many might not satisfy the statutory qualifications for appointment and promotion in the public fire service. At some of the smaller airports the scale of operations would make it uneconomical in manpower to provide airport fire cover from the public fire service. We were informed that satisfactory liaison had been established between airport and public fire brigades to ensure that adequate support facilities were available in an emergency and for the provision of joint training arrangements. It was also pointed out that many airports were located geographically outside the area of the controlling local authority, and that this would make integration with their public fire service more difficult.

142. We recognise the force of many of these arguments and we are grateful to those authorities who gave us information on these matters. Nevertheless, we consider that, from the point of view of providing effective fire cover at airports and maximum operational efficiency, there are strong arguments in favour of integrating local authority airport and public fire brigades. Few aircraft crashes occur at airports and as a result airport firemen necessarily can obtain only limited experience of operational fire-fighting in the course of their careers. Although frequent and realistic exercises are carried out by airport fire brigades, these cannot be a substitute for actual fire-fighting experience. We do not accept that fire-fighting and rescue techniques at air crashes are basically different from those carried out by the public fire service. Many aircraft crashes occur away from airports and have to be dealt with by the public fire service. We can see advantage from the point of view of command and control in integrating the two services. We took the opportunity, therefore, of visiting Liverpool Airport, where the airport fire brigade has been completely integrated with the City brigade. The airport appliances are provided solely for aircraft crash and rescue work and officers and men of the City brigade perform a two-yearly term of duty at the airport. Under this system many of the men in the brigade become conversant with airport traffic control and airport crash fire-fighting procedures. It also ensures that all men serving at the airport have had regular fire-fighting experience of a general nature, which has an important effect on maintaining morale. We were particularly impressed with the command and control advantages of integration, which ensures that the full resources of the brigade incuding its senior officers are available for airport fire-fighting operations. A further advantage we noted is that design and development of equipment for the airport and the public fire services

take into account the supporting role of the latter. We accept that full integration of local authority airport fire brigades and public fire brigades might lead to some increase in the cost of providing airport fire cover and that, because of the different conditions of service of airport firemen, special arrangements would be necessary, requiring goodwill by all concerned, to safeguard the position of these men during the transitional period following integration. But the issue which has to be faced is whether integration would provide a better standard of fire safety, particularly having regard to the increasing size of passenger aircraft and the general increase in air traffic which will occur in the future. With the proposed reorganisation of local government areas, it seems likely that most local authority airports will fall within the geographical area of the controlling local authority, which would facilitate integration. We have no doubt that full integration of the two services would be more efficient operationally. The only matter for consideration is whether the additional costs that might be involved would be justified. We RECOMMEND, therefore, that following the reorganisation of local government and the formation of fewer and larger fire authorities which we recommend in Chapter III, those local authorities which control civil airports should review their arrangements for providing airport fire cover and consider the operational advantages of full integration of their airport and public fire brigades.

BRITISH AIRPORTS AUTHORITY FIRE SERVICE

143. The British Airports Authority is responsible for Heathrow, Gatwick, Stansted and Prestwick airports and maintains its own fire brigade to provide fire cover at these airports. We have not taken evidence from the British Airports Authority but the report on the accident of the Boeing 707-465 G/ARWE at Heathrow Airport on 8th April, 1968,[1] served to reinforce the views which we had already formed that there would be substantial operational advantages at local authority airports in integrating the airport and public fire brigades. We note that the Heathrow accident report recommended that a broad based working party should study and report on the problems of aircraft fire and rescue operations, and suggest that the working party in the course of its deliberations should consider whether similar operational advantage would flow from integrating other airport fire brigades with the public fire service.

GOVERNMENT DEPARTMENT FIRE BRIGADES

144. We have referred in paragraph 9 to fire brigades provided by the Army and Air Force Departments of the Ministry of Defence and by the Board of Trade to provide fire cover at certain of their establishments. Such government department fire brigades would appear to be in a similar position to private industrial fire brigades, to which we refer in Chapter VI. These are not provided by all industrial organisations but only by those operating in comparatively isolated areas or engaged in activities where immediate action in case of fire is essential. Government departments should clearly have similar flexibility, but we think it appropriate to raise the question whether all these separate government fire brigades should continue to be run at public expense in areas where local authority fire brigades already provide effective cover. We note, for example, that the Navy

1. Published by H.M.S.O. 1969.

Department of the Ministry of Defence have abolished the Admiralty Constabulary fire service and rely on the local authority brigades to provide fire cover in Her Majesty's dockyards. We RECOMMEND that the departments concerned should review their arrangements for providing fire cover at their establishments and consider whether greater operational efficiency and savings in total public expenditure would ensue if at some of their establishments fire cover were provided by the public fire service.

CHAPTER VI

INDUSTRIAL FIRE BRIGADES

145. We have mentioned in paragraph 9 that many industrial establishments maintain works fire brigades. These are staffed by whole-time or part-time men specially trained for the purpose and many are equipped with mobile fire-fighting appliances. There do not appear to be any collated data on the number and the total manpower of works fire brigades, or on the number of fires fought by such brigades which were not attended by the public fire service. It is clear, however, that the works brigades vary in size, sophistication of equipment, status in the industrial organisation concerned and the quality of co-operation with local authority fire brigades. Provision of works fire brigades is a purely voluntary action on the part of managements and, in consequence, there is no statutory control over the training, operation and equipment of such brigades. Their existence is not, in general, taken into account by fire authorities in determining the standards of fire cover to be provided for the area but is regarded purely as a bonus.

146. Many works fire brigades date from the time before the establishment of a nation-wide public fire service, when they were the only means whereby ah industrialist could ensure the prompt availability of reasonable fire-fighting facilities at his premises. The position is now very different, particularly in urban high fire risk areas, where an early and substantial first attendance can be provided by the public fire service. The present trend and one which we expect to continue is for more industrial establishments to concentrate their own private efforts on fire prevention measures and to leave actual fire-fighting to local authority brigades. This does not mean that works fire brigades will disappear. We have recommended in Chapter V that there should be no change in the statutory position whereby a fire authority is only required to provide a fire brigade of sufficient strength to meet all normal requirements; and, accordingly, that fire cover should continue to be assessed in relation to the general character and risk of the area, and not in relation to an isolated fire risk. For a variety of reasons, some high risk industrial installations will continue to be erected in relatively remote areas and their owners or occupiers will wish as hitherto to include the provision of a works fire brigade in the arrangements which they provide to deal initially with outbreaks of fire on the premises. In addition, some industrial organisations with complicated high fire risk processes will wish to have their own works brigades, because the initial attack on a fire has to be made immediately and also requires a more detailed knowledge of the processes than can be possessed by a local authority fire brigade.

147. Availability of a works fire brigade in no way alters the responsibility of local authority fire brigades to attend a fire if called. This leads to the position that unless there is mutual respect and understanding between works and local authority fire brigades, difficulties or misunderstandings can easily arise. There is clearly concern in the public fire service that the training and experience of some works brigades are such that their initial attempts to fight a fire before the arrival

of the local authority brigade can make the task of the latter more rather than less difficult and dangerous, and that this is particularly the case when works brigades delay calling the public service unduly in the hope of extinguishing the fire by their own efforts. On the other side of the picture, industrial organisations tend to be apprehensive that too early a takeover by the local authority brigade with limited detailed knowledge of the process complications of a particular works may lead to unnecessary incidental damage.

148. Some witnesses have suggested to us that industrial brigades should be affiliated to local authority brigades and become subject to approved standards of efficiency or, alternatively, the local authority brigades should have a mandatory duty to inspect industrial brigades and approve their efficiency, organisation and equipment. It has also been suggested that it should be a mandatory requirement for the local authority brigades to be called simultaneously with the calling of the works brigades.

149. We consider that the imposition of such mandatory requirements on industrial concerns in connection with works brigades, which have been voluntarily provided, is both undesirable and unnecessary. We have been greatly impressed by evidence we have received of the excellent co-operation between many works and local authority brigades once close personal contact has been established at a sufficiently senior level between the fire service and the industrial management concerned. Given a genuine willingness to co-operate, much can be done without mandatory requirements, by way of training and joint fire exercises, joint consultation about the provision of equipment and agreement of procedures for calling the local authority fire brigade. We believe that encouragement of this type of close co-operation between works and local authority brigades on a purely voluntary basis provides the best way to deal with the difficulties and misunderstandings which sometimes arise between them and which, in any case, appear to us to have been somewhat exaggerated.

150. We have been told by many local authority chief officers that they would much prefer to be called out frequently to industrial fires which they find on arrival to have been extinguished by the works brigade, than to run the risk of a delayed call resulting in their having to deal with a fire which has got out of hand. While we are not in favour of making it mandatory for works brigades to notify the local authority brigade immediately of any fire, we do RECOMMEND that industrial managements shoidd impress on their works brigades the importance of erring on the safe side in calling for outside help. We also RECOMMEND that, for any particular factory, the circumstances in which the local authority brigade should be called should be discussed and agreed between the management and the chief officer of the local authority brigade, rather than for this to be left entirely to the discretion of the officer in command of the works brigade.

151. Finally, the point has been made to us that no reports are submitted by works fire brigades on fires which they extinguish without assistance and that such fires, therefore, are not included in national statistics. We consider that this is a matter which the enlarged Home Office Fire Department might take up with the appropriate organisations representing industrial fire brigades. The definition of a fire calling for a report might, we suggest, be one extinguished by the works brigade rather than by plant operatives.

CHAPTER VII

RECRUITMENT OF WHOLE-TIME FIREMEN

INTRODUCTION

152. Responsibility for recruitment rests with individual fire authorities but the qualifications for appointment of whole-time operational firemen are prescribed by the Fire Services (Appointments and Promotion) Regulations made by the Secretaries of State. These provide that a man must be between the ages of 18 and 31 (35 in the case of a former member of the armed forces) at the time of appointment as a fireman and must meet certain closely specified physical requirements as well as reach a minimum educational standard. No national educational standards are prescribed. The Regulations provide that the fire authority should satisfy themselves about the prospective fireman's proficiency in reading, writing, arithmetic and such other subjects as they consider relevant. Operational whole-time firemen are recruited to the fire service only at the basic rank of fireman and promotion to a higher rank is governed by the Regulations which require *inter alia* a minimum operational experience of two, four and five years for the rank of leading fireman, sub-officer and station officer respectively, in addition to the passing of nationally prescribed promotion examinations and tests. A man must be of at least station officer rank for promotion to assistant divisional officer, divisional officer, assistant chief officer or chief officer but no other formal requirements are prescribed. Chief officer appointments are subject to the approval of the appropriate Secretary of State.

RECRUITMENT STATISTICS

153. The establishment of whole-time men in brigades has risen in England and Wales from 20,586 to 27,487 and in Scotland from 2,026 to 2,997 between 1958-1966. This increase of the order of one-third in England and Wales and of nearly one-half in Scotland is a significant factor in accounting for the rapidly rising cost of the fire service mentioned in Chapter II. Although the increasing demands on the service to which we have referred in that chapter have contributed to the increase in authorised establishment, the main causes have been changes in duty systems, which have resulted in a shorter working week for firemen, and reviews of standards of fire cover since 1958.

154. From 1948 onwards the weekly availability of most firemen was 60 hours. In 1956 and 1961 this was reduced to 56 and 48 hours respectively. In 1967 Report No. 32 of the National Board for Prices and Incomes[1] proposed an additional eight-hour bonus shift for firemen to increase their availability from 48 to 56 hours a week. Most authorities accepted this proposal and the establishment figures for 1967 and again for 1968 were reduced in England and Wales, though not in Scotland. Tables 9 and 10 and figures 9 and 10 show the developments through the period 1950-1968.

1. Fire Service Pay, Cmnd. 3287.

TABLE 9

ESTABLISHMENT, STRENGTH, RECRUITMENT AND PREMATURE WASTAGE

WHOLE-TIME MEN—ENGLAND AND WALES

Year	*Establishment at 31st December*	*Strength at 31st December*	*Recruits during year*	*Total loss during year*	*Premature Wastage*	
					No. during year	*% of strength*
1950	19,388	18,629				
1951	19,514	18,549				
1952	19,513	18,680				
1953	19,561	18,660				
1954	19,609	18,539				
1955	19,640	18,211				
1956	19,939	18,770				
1957	20,171	19,405	1,439	825	591	3·0
1958	20,586	19,932	1,346	793	526	2·6
1959	21,782	20,557	1,565	970	675	3·3
1960	22,569	20,926	1,744	1,393	972	4·6
1961	23,961	21,241	1,845	1,512	949	4·4
1962	24,705	22,613	2,593	1,230	620	2·7
1963	25,092	23,442	2,311	1,530	710	3·0
1964	25,821	23,680	2,022	1,771	1,086	4·6
1965	27,201	24,097	1,959	1,591	815	3·4
1966	27,487	24,230	2,032	2,039	1,305	5·4
1967	25,748	24,102	1,748	1,876	1,111	4·7
1968	25,135	24,047	1,647	1,702	1,033	4·3

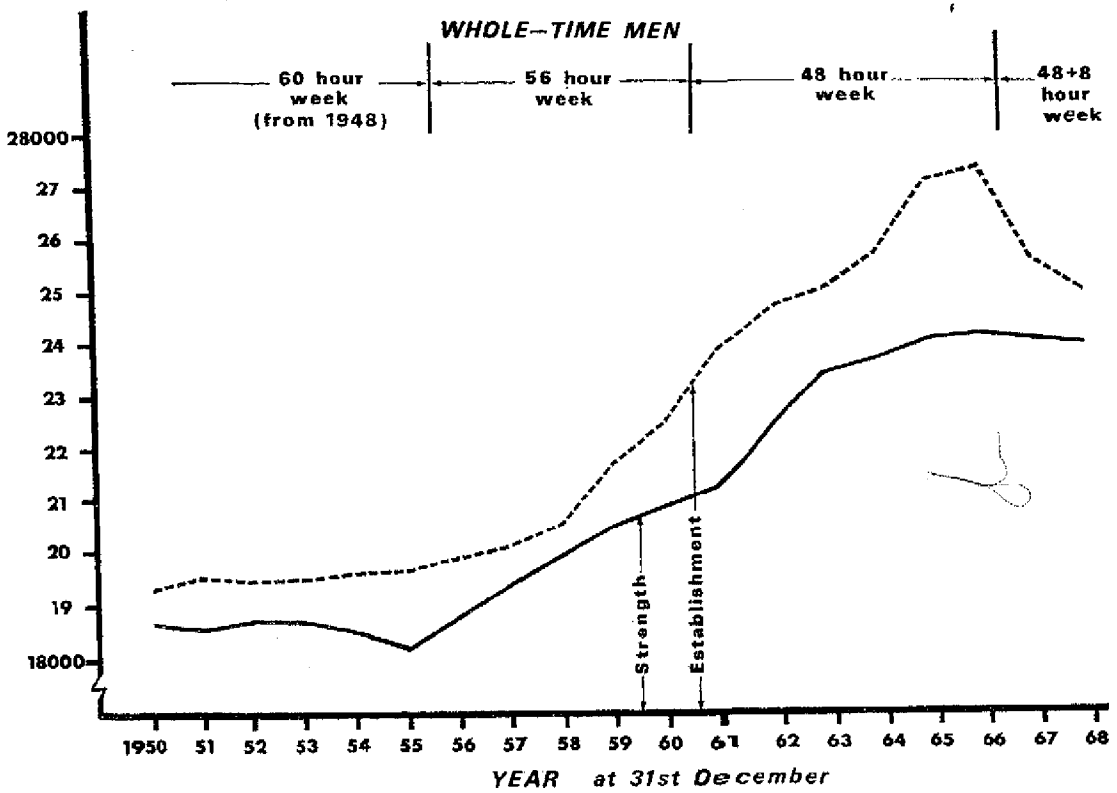
TABLE 10

ESTABLISHMENT, STRENGTH, RECRUITMENT AND PREMATURE WASTAGE

WHOLE-TIME MEN—SCOTLAND

Year	*Establishment at 31st December*	*Strength at 31st December*	*Recruits during year*	*Total loss during year*	*Premature Wastage*	
					No. during year	*% of strength*
1950	1,821	1,787				
1951	1,828	1,762				
1952	1,833	1,776				
1953	1,854	1,771				
1954	1,856	1,784				
1955	1,861	1,781				
1956	1,927	1,853				
1957	1,957	1,910	187	133	104	5·4
1958	2,026	1,998	156	72	52	2·6
1959	2,108	2,058	141	81	54	2·7
1960	2,189	2,106	175	116	74	3·5
1961	2,297	2,175	197	117	79	3·6
1962	2,385	2,405	342	113	62	2·6
1963	2,797	2,701	436	143	87	3·2
1964	2,981	2,809	280	188	118	4·2
1965	3,028	2,795	189	212	133	4·8
1966	2,997	2,767	186	250	175	6·3
1967	2,997	2,720	146	200	145	5·3
1968	2,996	2,649	131	198	144	5·4

Fig. 9 ESTABLISHMENT & STRENGTH (ENGLAND & WALES)



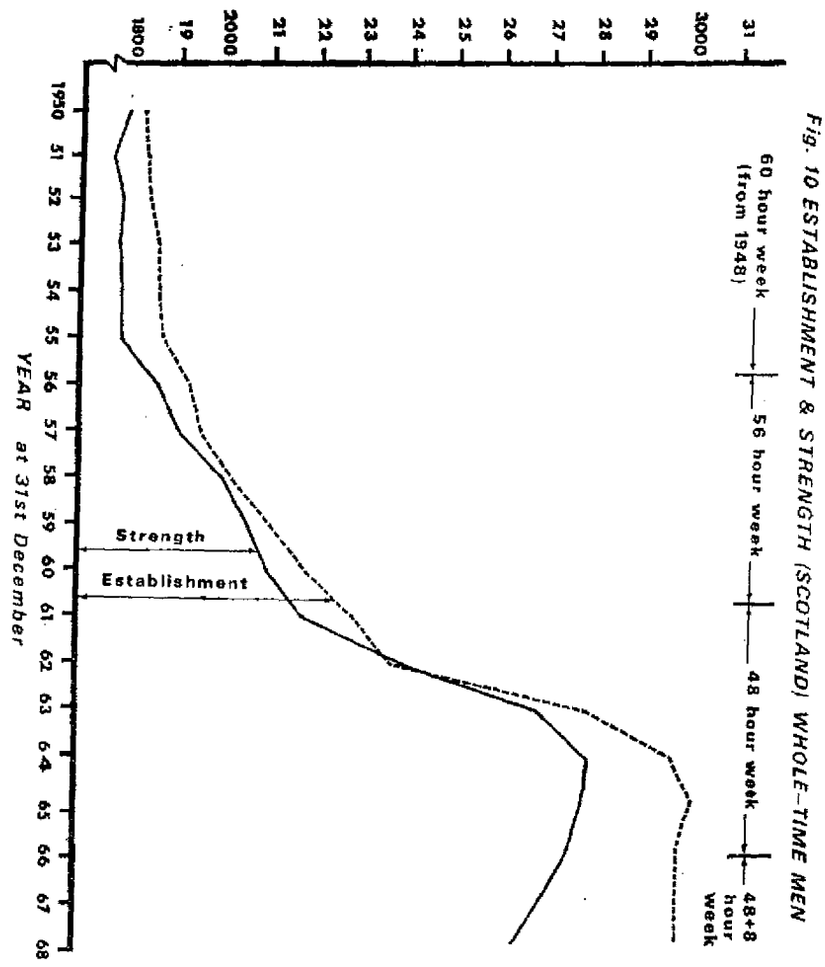


Fig. 10 ESTABLISHMENT & STRENGTH (SCOTLAND) WHOLE-TIME MEN

155. A measure of the adequacy of recruitment is whether the gap between establishment and actual strength is increasing or decreasing. It will be seen from figure 9 that in England and Wales the gap increased from about 3% in 1958 to 12% in 1966, indicating that recruitment over this period failed to meet the estimated requirements of brigades. The acceptance by most brigades of the recommendations of the National Board for Prices and Incomes reduced the establishment requirements and the gap narrowed by 5% by 1968, most of it accounted for by the shortage of men in the London Fire Brigade. In other parts of England and Wales adoption of the bonus shift system largely eliminated the gap and in some brigades produced a temporary surplus. In consequence recruitment was reduced or suspended in some brigades. It is therefore too early to say whether or not normal recruitment is likely to meet requirements in the immediate future. Figure 10 shows that in Scotland from 1958 to 1963 the gap between establishment and strength was at a maximum of about 5% in 1961, nil in 1962 and only

3½% in 1963. Thereafter the position deteriorated rapidly and by 1966 the gap was nearly 8%. Moreover, the change to the bonus shift in Scotland was followed by no decrease in establishment, partly because Glasgow did not adopt the bonus shift, and a continuing reduction in strength resulted in a gap of 11½% by 1968. Looking at the position in Great Britain as a whole, clearly there can be no complacency about present and future recruitment of sufficient men.

PREMATURE WASTAGE

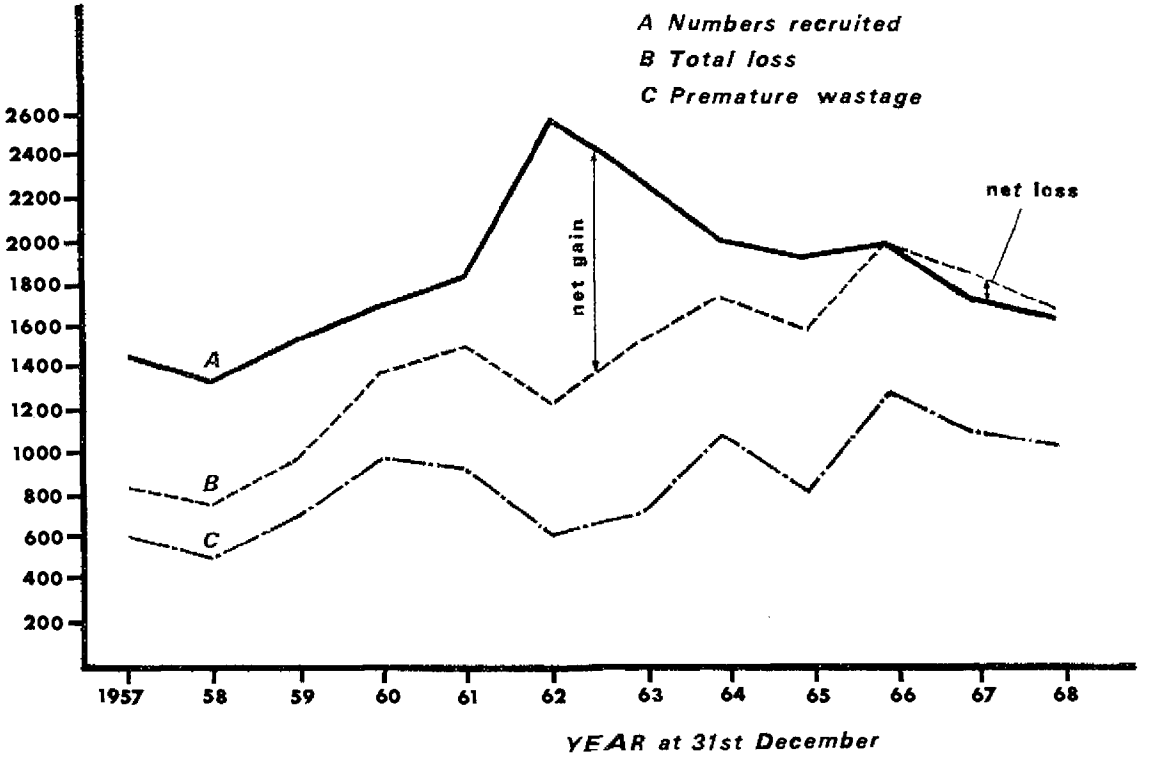
156. Premature wastage, which we define as the number of men leaving the service for personal or disciplinary reasons as distinct from death or retirement, is a major factor bearing on recruitment. A direct effect is that with high premature wastage more recruits are required to maintain establishment. An indirect effect is that potential recruits are likely to be deterred from joining a service which so many men are leaving because of dissatisfaction with the pay and conditions of the job. Tables 9 and 10 include data on the number of men leaving the service prematurely during 1957-1968 in England and Wales and Scotland. The same data are illustrated in figures 11 and 12. The number of men leaving prematurely has varied considerably from year to year but over the whole period 1957-1968 in England and Wales it has nearly doubled, whereas over the same period total strength of brigades has increased by less than a quarter. Premature wastage reached a maximum figure in 1966 when it was 5·4% of strength. Between 1966 and 1968 there has been a reduction of 20% in premature wastage, which expressed as a percentage of strength, brings it to 4·3% in 1968. We consider, however, that it is much too early to form an opinion whether this is likely to be a continuing trend. In any case there is a long way to go before premature wastage in the fire service reaches an acceptable level. Examination of the position in Scotland shows a broadly similar pattern.

157. We have sought to compare premature wastage in the fire service with that in other public services but have only been able to make a comparison with the police in England and Wales over the period 1960-1965. The average premature wastage in the fire service expressed as a percentage of strength was 3·5, considerably higher than the corresponding police figure of 2·4.

158. We were also concerned that analyses in the annual reports of H.M. Chief Inspector of Fire Services and H.M. Inspector of Fire Services for Scotland indicated that the largest group of whole-time men to leave the service in advance of retirement comprised men who had served for more than one year and not more than five. The second largest group were those who had served for more than five and up to 10 years. These two groups taken together accounted for over 60% of the premature wastage in the year 1968. This clearly shows that many men who have given the service a reasonable trial are dissatisfied with it. It is also regrettable that premature wastage in these groups represents a loss of experience and a waste of training effort which are bad for the morale of the service generally.

159. We conclude that future recruitment of an adequate number of men to the fire service (at present estimated at 2,000 per year) is by no means assured. Careful attention, therefore, will have to be paid continuously to making the service at least as attractive as other employments open to potential recruits.

Fig. 11 WHOLE–TIME MEN (ENGLAND & WALES)



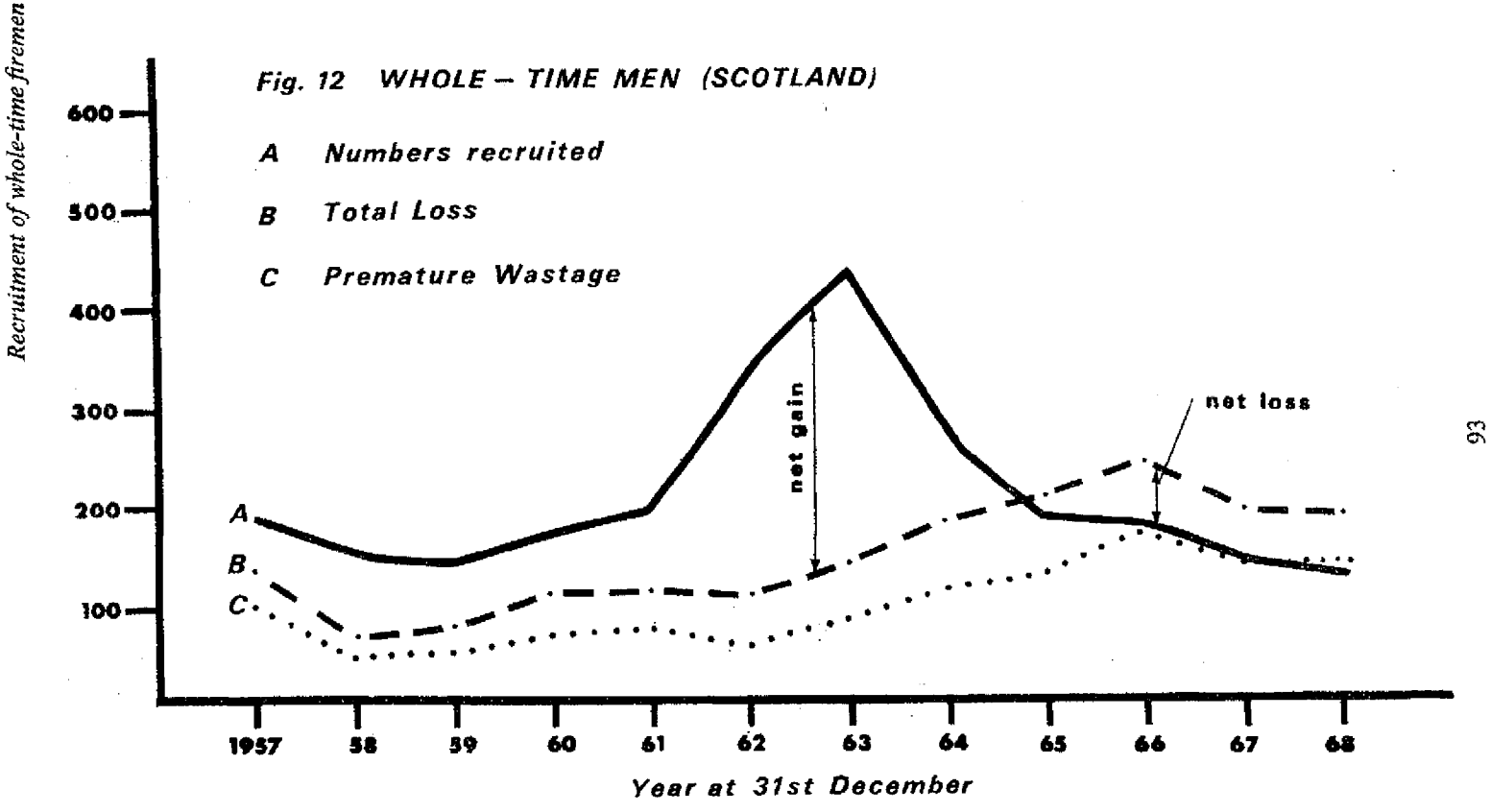


Fig. 12 WHOLE – TIME MEN (SCOTLAND)

A Numbers recruited

B Total Loss

C Premature Wastage

THE QUALITY OF RECRUITS AND THE NATURE OF THE SERVICE

160. In the preceding paragraphs we have confined ourselves to the question of recruiting men in sufficient numbers. Quality of recruits is also a matter of the greatest importance in view of the increasing complexity of fire service activities and the need, particularly under a one-tier system of entry, to obtain a proportion of recruits with good potential for promotion to officer ranks. It is regrettable that so little work has been done to analyse the duties of the various ranks in the fire service, and to identify the personal qualities, aptitudes and educational standards required in all or a reasonable proportion of recruits and also the further qualities and skills which have to be developed by in-service training and education. Our consideration of these matters has, however, been greatly helped by serving officers, the Home Departments and the National Board for Prices and Incomes Report No. 32. We are also greatly indebted to Mr. R. M. Mackenzie of the University of Edinburgh who carried out for us an analysis of jobs performed in the South Eastern Brigade in Scotland, and of the level of intelligence of two intakes of recruits under training at the West Riding of Yorkshire Training School. Although these samples were too localised to draw any firm conclusions, we believe that as a result of our studies we can with confidence put forward the *following analysis of the situation.*

161. The average educational attainment of recruits in the fire service has never been high and since the end of the second world war has shown no sign of the improvement which might have been expected as a result of the changes of the public education system which we discuss in paragraphs 167 and 168. This does not mean that men of excellent calibre and promise have not joined the service during this period. Indeed, we have met and have been impressed by a number of them who have now reached officer status. Nevertheless, the generally low educational attainment of recruits remains a matter for concern in the light of the increasingly important and demanding tasks facing the service.

162. The fire service is a uniformed and disciplined service and there can be no doubt that it must remain so in order to discharge its operational functions of fighting fires efficiently, of saving life and of protecting property. Firemen are called upon to face considerable physical dangers often at short notice and in unexpected situations. Discipline and drill must be such that men will respond efficiently to orders given by superior officers and know precisely how to carry them out if they are not to endanger their own lives and those of others. Similarly, in the middle and higher ranks of the service officers need to have the capacity to make quick and decisive judgments. They must also have the personal qualities which ensure that the men have the fullest confidence in them. We recognise, therefore, that willingness to accept the values and attitudes necessarily associated with a uniformed and disciplined service is one of the essential requirements for a successful fireman.

163. The successful handling of fire appliances and equipment, which have become increasingly complex, and the recognition of dangers arising from the equipment and materials used in industry, commerce and the home call for practical knowledge and mechanical skills. While these attainments can only be developed fully by intensive and systematic training it is highly desirable that recruits to the fire service should be men with a natural aptitude for this type of work.

164. In addition, firemen of all grades are increasingly concerned with the work of fire prevention. The increase of legislation in this field during recent years has placed on the fire service a burden of advisory duties and inspectorial functions which is likely to increase. To discharge such functions adequately firemen require intelligence, technical knowledge and ability to communicate with employers, employees and members of the public and to give advice in a manner which is likely to be accepted rather than resented.

165. The evidence available to us suggests that the service has been successful in the past in attracting men with the qualities and aptitudes referred to in paragraphs 162 to 164 and that the nation is well served by its present chief fire officers, firemasters and senior officers generally. We have, therefore, been interested to examine the experience and educational attainments which those holding chief officer posts in 1968 possessed at the time that they joined the service. No significant differences appeared between England and Wales and Scotland. Of the 142 chief officers concerned 123 joined the service before 1945, 17 during 1946 and 1947 and only two in 1948 or later. Only 25 of the 142 had some formal education beyond the minimum statutory school-leaving age, but the majority of them had experience of work as skilled craftsmen and had the broadening experience of serving in the fire service or the armed forces under war-time conditions.

166. In forming an opinion whether men of the required quality will be attracted to the service through a single-tier entry system now and in the future, it is necessary to take into account the changes in the public education service in the country which have taken place since the last war.

DEVELOPMENT OF THE PUBLIC EDUCATION SERVICE

167. It is only since the passing of the Education Act 1944[1] that there has been free secondary education for all throughout Great Britain. The effect of this on the education service as a whole has only become apparent during the last ten years or so. The school leaving age was raised from 14 to 15 in 1947 and a massive increase in school education beyond 15 occurred during the 1950's and 1960's and is still continuing. Detailed statistics have been published year by year by the Department of Education and Science and one or two brief references here will suffice. For instance, in January 1958 36·6% of the 15 year age group was at school in England and Wales. In 1967 the corresponding figure was 65·6%. In January 1958 3·5% of the 18 year age group was in full-time attendance in school while the corresponding figure in 1967 had risen to 5·3%. Between 1961 and 1967 the percentage of the pupils obtaining one or more General Certificate of Education "A" levels, two or more "A" levels, or three or more "A" levels had risen respectively from 9·1 to 14·6; from 6·9 to 10·9; and from 4·4 to 6·9 of the relevant age group in England and Wales. Between 1961 and 1967 the numbers of those obtaining two or more General Certificate of Education "A" level passes (i.e. minimum degree course entry qualifications) rose from 43,300 to 79,300 and is expected to rise to 94,900 by 1975 and to 131,600 by 1980. Similar developments have taken place in Scotland.

168. In short, a much greater proportion of the population of Great Britain is staying longer at school and is obtaining higher educational qualifications before leaving. Moreover, a growing proportion of them is pursuing some form of further

1. 1944 C.31.

education after leaving school. The potential ability of those who leave at the minimum age (now 15) is therefore probably lower than it used to be 25 years ago and this trend will continue. If, therefore, recruitment to the fire service is going to include the same proportion of potential officer material as in the past, the service must:

(*a*) Find means of attracting more of the people who stay longer at school and obtain higher educational qualifications and for whom there is a wide choice of employment, particularly in industrial areas.

(*b*) Provide more extensive internal educational and training schemes to develop to the maximum the latent talents of those recruits who left school at or near the minimum leaving age. This is a need which is increasingly recognised by other employers and by the establishment of a whole range of Industrial Training Boards.

169. The improvement of internal training and education is in itself one of the measures which would help to attract people of better educational attainment into the service, since they are increasingly regarding the availability of training and advancement opportunities as one of the main attractions of a job. This fact is also well recognised by employers and expanded education and training schemes have become commonplace in industry in the last 10 years.

170. Furthermore, the attitudes of parents and others responsible for school leavers have changed. We now have a first generation of parents who themselves had opportunities for better and longer education and are insisting on this in even greater measure for their children. This process will continue to gain momentum in successive generations.

TWO-TIER ENTRY

171. We have considered carefully whether the introduction of a two-tier entry system would be a way of attracting to the service a satisfactory proportion of better-educated recruits. By two-tier entry we mean that in addition to the normal method of entry and progress, there would be an alternative method for a small number of men with defined educational attainments (e.g. a degree). They would enter either to the basic fireman's grade or to a special cadet type grade from which guaranteed or virtually guaranteed promotion to officer rank would follow quickly after appropriate training. Feelings both for and against such a system run high in the fire service.

172. In our visits abroad we noted that there is no two-tier entry system in the United States of America, but that such a system was operated in the larger cities of Japan, and that a three-tier system operated in the larger cities in West Germany. We concluded that the conditions in Japan and Germany are so different from those in Great Britain that a recruitment system which may be satisfactory in those countries was unlikely to be so in this country. It appeared that in Japan a fairly high proportion of officer cadets did not become officers. If a two-tier system were introduced in this country and the quality of officer cadets was not such that nearly all of them made the grade, the scheme would quickly come into disrepute. In West Germany only the larger towns were required to have professional public fire brigades. These have always been organised on military lines with direct recruitment to the officer ranks and promotion to senior officer

status through the ranks was exceptional. Such a system would be quite unacceptable in the nation-wide public fire service in this country.

173. We feel that a two-tier system of entry could be devised for the British fire service which would be practicable and fair in that it would not prejudice the chances of firemen who joined the service in the normal way to achieve promotion through the ranks to even the highest posts. Nevertheless, we do not recommend the introduction of a two-tier system of entry, not because of the strong views against it held by many members of the service but because we do not believe on balance that it would be particularly effective or in the best interests of the service.

174. The principal case for two-tier entry into the fire service is that it would attract potentially able men with high educational attainments who are likely to be capable of rapid promotion to responsible posts. While it is true that a substantially higher proportion of the population is staying on at school to 18 or 19 years of age, and that many of these subsequently go on to a university or college, it does not follow that a significant number of them would be attracted into the fire service even through a two-tier entry scheme. Most of those who have studied at school for three to four years beyond the present statutory leaving age have the necessary qualifications to proceed to some form of higher education or to enter industrial or other employment with good pay and promotion opportunities and conditions which are less physically arduous than those in the fire service.

175. The possession of education above the average and ability to pass examinations are in themselves no guarantee that a man has the qualities of initiative and leadership required if he is to reach the higher ranks in any employment. There is thus the danger not only that the number of applicants under a two-tier entry system to the fire service would be small for the reasons discussed in paragraph 174 but that such applicants as there were would come from the lower end of the personal quality and general intelligence spectrum of those benefiting from higher education. If this were to be the case a two-tier system would be of little value to the fire service, in which, in addition to qualities of initiative and leadership, those of physical courage and calmness in operations are essential.

176. In deciding against a two-tier entry scheme we have also had very much in mind that the encouragement of recruitment of better qualified and potentially able men can be brought about by other means. In particular, we attach great importance to the introduction of a new type of accelerated promotion scheme, improved training for promotion and in-service training and education arrangements generally and the reduction in qualifying periods for promotion which we recommend in Chapters VIII and IX.

MINIMUM AGE OF RECRUITS

177. There is, however, one class of potential recruit to the fire service whose entry should be facilitated. Figures quoted in paragraph 167 indicate that the proportion of pupils who stay on at school naturally diminishes with age. In particular, a significant proportion of those who stay on beyond the minimum leaving age do not complete a General Certificate of Education "A" level course or its equivalent. An appreciable number of boys leave school having completed one or two years in the sixth form without attaining outstanding academic results. We believe the service could benefit by the recruitment of men from this sector of

the school leaving population. With this in mind we RECOMMEND that the statutory age of recruitment should be lowered from the present minimum of 18 years to 17 years and 6 months, in order that such men can if they wish join the fire service immediately on leaving school and before they obtain other employment. People now mature earlier and we do not consider that this lowering of the minimum recruitment age to 17½ years would make unreasonable physical demands on the recruits. In any event all recruits are required to undergo a period of compulsory full-time training, by the completion of which most of those entering at this new minimum age will be 18 years of age or little short of it. We believe that this relatively minor change in recruitment qualifications may well produce modest but worthwhile results.

JUNIOR FIREMEN

178. In 1964 the Central Fire Brigades Advisory Councils for England and Wales and for Scotland adopted a report of a joint committee set up to consider a scheme for the recruitment of junior firemen. The Secretaries of State accepted the advice of the Advisory Councils, and the scheme was introduced in 1965.

179. The scheme provides for the recruitment of young men between the ages of 16 and 17 years 3 months as junior firemen. Depending on the age of entry, one to two years are spent in full-time education and training before promotion to the rank of fireman. Junior firemen are non-operational members of brigades. The precise nature of the practical fire service training which they undertake is left to the discretion of fire authorities. It was envisaged when the scheme was introduced that individual brigades might have difficulty in making provision for small numbers of junior firemen, and a recommendation was made that in such circumstances education and training of junior firemen should be organised on a co-operative or area basis. We understand that little has been done on these lines.

180. It was hoped that the scheme would encourage relatively able young men to join the service direct from school before committing themselves to some alternative employment. This was thought important because of the gap between the school leaving age and the minimum age of 18 for joining the service as a whole-time fireman. It was hoped that junior firemen would attain a standard approaching the "O" level of the General Certificate of Education by completion of their training and that eventually the educational standard for entry to the junior fireman scheme might be the Certificate of Secondary Education which was then just being introduced into secondary schools in England and Wales.

181. The evidence we received ranged from great enthusiasm for the junior fireman scheme in principle and a desire to extend it, to complete scepticism and the belief that the scheme had been a failure. We therefore analysed the results of the scheme over the four years 1965-1968 in order to establish some facts.

182. The average normal annual intake of whole-time firemen represents about 7% of establishments. The Advisory Council's scheme for junior firemen provided for an annual intake to a brigade of some 3½% of the whole-time establishment on average, i.e. about half of the annual intake for each brigade. Since it was assumed that most junior firemen would serve for two years before reaching the age of 18 and becoming operational firemen, it was recommended that the total establishment of junior firemen in any one brigade should not normally exceed 7% of the whole-time male establishment.

183. Of the 142 brigades in Great Britain only 46 have recruited junior firemen. We do not know precisely why the remaining brigades did not operate the scheme, but think it probable that many smaller brigades did not find it practical in the absence of some co-operative scheme with neighbouring brigades and that others may have been sceptical about its value. Some statistical results of our inquiry are given in table 11.

TABLE 11

WHOLE-TIME JUNIOR FIREMAN SCHEME

	1965	*1966*	*1967*	*1968*
Authorised establishment				
in 42 brigades in England and Wales	888	987	1,053	575
in 4 brigades in Scotland	29	39	39	39
Percentage of whole-time establishment				
in 42 brigades in England and Wales	3	3·5	4	2
in 4 brigades in Scotland	1	1	1	1·3
Number of junior firemen recruited				
in 42 brigades in England and Wales	260	289	198	53
in 4 brigades in Scotland	15	11	5	9
Number of junior firemen who left the service each year				
in 42 brigades in England and Wales	20	34	46	27
in 4 brigades in Scotland	1	3	1	not known
Average age of junior firemen on recruitment				
in 42 brigades in England and Wales	16 y. 5 m.	16 y. 5 m.	16 y. 4 m.	16 y. 4 m.
in 4 brigades in Scotland	16 y. 3 m.	16 y. 1 m.	15 y. 8 m.	16 y. 1 m.
Average no. of G.C.E. "O" or S.C.E. level passes of recruits				
in 42 brigades in England and Wales	0·8	0·6	0·5	1·0
in 4 brigades in Scotland	3·7	2·5	5·0	2·0

184. These figures show that the target for recruitment of junior firemen in the 46 brigades was set substantially below the ceiling figure of 7% of whole-time establishment. Even so, the number of junior firemen actually recruited has been substantially below the target, which indicates recruitment difficulties even in those brigades which had been convinced of the need for the scheme and were enthusiastic about it. The average age of recruits has been a little over 16 years, so that nearly all the junior firemen have spent the greater part of two years in training. The number of junior firemen recruits who resigned each year, coupled with the low recruitment figure, since the scheme started has caused us to question value.

185. One measure of the effectiveness of the training of junior firemen is the number of General Certificate of Education "O" level or equivalent passes obtained by junior firemen as a result of their course. The evidence is that by the 1st September, 1968, the 523 General Certificate of Education "O" level passes possessed on recruitment by the 800 junior firemen entering the service in England and Wales during the years 1965-1968 had increased to only 587 such passes. In

Scotland the 125 Scottish Certificate of Education "O" level passes possessed on recruitment by the 40 junior firemen had increased during the same period to 142. This is a minimal increase in the light of the full-time education and training effort expended on these recruits, and does not bear out the original hope that junior firemen might reach the envisaged educational standard by the end of their training.

186. The substantial reduction in authorised establishments and actual recruitment of junior firemen in England and Wales during the year 1968 was almost wholly due to the decision by the Greater London Council to run down and close its full-time residential training college for junior firemen at Swanley in Kent. Despite the support given to the scheme by the Council, experience had indicated that the results achieved did not warrant such expensive training (about £2,500 per recruit) and that neighbouring authorities had not availed themselves of available places. The current need for economy in the whole field of local government finance made such a decision inevitable.

187. Inquiry in 1968 amongst the 46 brigades which have taken part in the scheme indicated that 21 were recruiting normally, five were recruiting with some restrictions, while 16 had either temporarily or indefinitely suspended recruitment. Four other brigades had an authorised establishment and intended to recruit but had been unable to do so. Although only 21 of the 46 brigades were recruiting normally, 34 of them were not in favour of abolishing the scheme.

188. We have sought to establish whether, despite its failure to increase the educational attainments of junior firemen, the scheme has been a useful source of firemen of above average ability and good officer potential. The statistical evidence we have is incomplete and no general consensus of opinion has emerged. This is due in part to the small number of junior firemen recruited; to the relatively short time during which the scheme has operated; and to variations in the quality of junior firemen recruits due mainly to differences of employment trends in different parts of the country. We have come to the conclusion, however, that in spite of local enthusiasm of some chief officers and fire authorities, the scheme has failed to make a significant impact on the recruitment of firemen either in terms of quantity or promotion potential. Moreover, in the light of the trend of more able boys to stay at school to the age of 17 or 18, we think it unlikely that future recruitment at 16 years of age would bring in men of above average, or even average, ability and promise. With few exceptions the average junior fireman recruit does not, we feel, warrant the substantial cost of what is virtually specialist full-time education provided entirely at the expense of fire authorities. The number of junior firemen in each brigade, and even in the fewer and larger brigades which we recommend in Chapter III, is likely to be too small to warrant provision for their full-time education in each brigade. The provision of a national residential training centre for junior firemen might be a possibility but even this is unlikely to bring down costs to a justifiable figure.

189. With the inevitable limitation of resources, finance and skilled manpower for education and training, we are of the opinion that the fire service would benefit more by concentrating all its resources and energy on the training, education and promotion schemes which we discuss in chapters VIII and IX. We therefore RECOMMEND that the junior fireman scheme be abolished as soon as junior firemen now in post have progressed to the rank of fireman or have left the service.

OTHER RECRUITMENT CONSIDERATIONS

190. A very important need in connection with the recruitment of men in the necessary numbers and with the required qualities is to ensure that the opportunities in the fire service for continued education and training and for promotion to senior and responsible posts are widely known to the general public, teachers, youth employment officers and careers advisory officers. We consider that the activities of fire authorities on these matters should be augmented by central publicity provided by the Home Office Fire Department.

191. It should be borne in mind that efforts to attract more and better qualified recruits is only one facet of solving the problem of recruitment. The main necessity is to keep the number of recruits required to a minimum by making sure that the manpower of the service is used to maximum efficiency and that the factors responsible for high premature wastage are removed. For this reason we recommend in Chapter IV that the enlarged Home Office Fire Department should be responsible *inter alia* for the continuous and extensive study of manpower utilisation within the fire service.

CHAPTER VIII

TRAINING AND EDUCATION OF WHOLE-TIME MEN

INTRODUCTION

192. Over the past few decades all occupations have been subject to an extremely rapid change in circumstances due mainly to technological advances and to the increasing complexity of human organisation. These changes have resulted in a need, stemming from economic necessity and personal and social pressures, for much improved and extended facilities for education and training at both the pre-employment stage and during employment. This need has been recognised nationally by the massive expansion of public education services at all levels and through the Industrial Training Act of 1964[1]. Young people and their parents, in assessing the attractiveness of a particular job, are now increasingly taking into account the quality and range of education and training which it provides. The fire service, in these respects, is no different from other occupations and professions and we are convinced that, from the standpoints of the maintenance and improvement of operational efficiency, the reduction of premature wastage and the recruitment of sufficient numbers of men of the desired quality, education and training facilities need to be greatly extended and improved and to be demonstrably as good as or better than those available in other employments.

PRESENT ARRANGEMENTS

193. In the fire service it is neither possible nor desirable to draw a firm line of demarcation between education, that is the acquisition of knowledge of basic facts, principles and concepts and development of ability of self-expression verbally and in writing; and training, by which we mean application of basic knowledge and a variety of skills to the day-to-day work of the service. Existing instructional courses in the fire service are a combination of education and training and will continue to be so. Hereafter in this report we shall, therefore, use the word "training" to denote both elements except where specifically stated.

194. Present training arrangements in the service may be classified under the following headings:—

(*a*) recruit training;
(*b*) continuation training;
(*c*) specialist training;
(*d*) training of instructors;
(*e*) training for promotion;
(*f*) training for command.

195. Training arrangements are governed by the Fire Services Act 1947. The Act places a duty on every fire authority to secure the efficient training of members of the brigade and empowers the authorities to establish and maintain training centres for providing courses of instruction for members of their own or other fire brigades.

1. 1964 C.16.

196. Fire authorities discharge their training obligations in a number of ways. In England and Wales there are at present 14 local fire authority recruit training centres[1] which between them provide recruit training for all the brigades in England and Wales. In Scotland recruit training is carried out centrally at the Scottish Fire Service Training School at Gullane, East Lothian, which is administered by the Scottish Home and Health Department. Some specialist and continuation training is carried out at the majority of these centres. Additionally some regular drill and training are carried out at fire stations but what can be achieved in this way is limited and variable, being dependent on the frequency of fire and other emergency calls, the type of duty system and the availability of skilled instructors. Finally, a small number of brigades have made arrangements with local colleges of further education for organised educational courses for some men in the lower ranks of the service, largely in order to create or revive an interest in study and to improve general educational standards.

197. Although the 1947 Act gives the Secretary of State power to make regulations governing the standard of training of members of brigades, no such regulations have been made, except in the matter of live rescue drills in England and Wales as described in paragraph 17. The Home Departments have, however, issued a syllabus of recruit training for whole-time men for the guidance of fire authorities and this is used generally in England and Wales and at the central school at Gullane. A Fire Service Drill Book for firemen has been published, as well as nine volumes of a Manual of Firemanship, a comprehensive text book on all aspects of firemanship which is used not only by brigades in Great Britain but also by many brigades overseas. The manner in which training is carried out by fire authorities and the standards maintained are reviewed annually by H.M. Inspectors of Fire Services.

198. At the present time each of the 14 area recruit training schools is the financial responsibility of the fire authority in whose area it is situated. Other fire authorities utilise these facilities and pay a *per capita* charge for the attendance of each of their recruits. We have noted with regret the statement in the Banwell/Abel Report[2] of 1966 that there is considerable variation in the charges made for recruits at the different training centres and that there is evidence of "the harmful effect of the existing system of cut-price competition under which recruits are sent to the training school offering the lowest charges, regardless of distance, facilities provided, standard of training, or the effect such course of action must have on other training schools".

199. The 1947 Act also empowers the Secretary of State to establish a central training institution and one or more local training centres for the fire service as a whole. Under these powers, the Training School at Gullane and the Fire Service Staff and Technical Colleges have been established. Fire authorities send a limited number of firemen to centrally organised courses at these establishments. Until 1st April, 1967, the annual costs of the Fire Service College, and of the Training School at Gullane, including capital charges incurred, were shared between the Secretaries of State and fire authorities concerned. Half the cost of the College

1. Formerly there were 15 centres. In 1968 the Greater London Council closed the former Middlesex training school at Finchley.

2. Local Fire Service Training Facilities—Report to the County Councils Association, the Association of Municipal Corporations and the Greater London Council.

and three-quarters of the cost of the Training School were recovered from fire authorities by deduction from general grant. With the introduction of rate support grant, it was considered simpler for the whole cost to be borne by the Secretaries of State. During 1967, the cost of the Fire Service College was about £300,000, and of the Training School at Gullane about £80,000. Fire authorities have always paid the salaries and travelling expenses of members of their brigades attending centrally run courses.

200. The Scottish Fire Service Training School at Gullane has provided the following courses:—

(*a*) recruit training courses of 12 weeks' duration for new recruits from all Scottish brigades;

(*b*) continuation courses of four weeks' duration for leading firemen;

(*c*) courses of two weeks' duration for brigade instructors;

(*d*) courses of three weeks' duration for instructors in the use of breathing apparatus, and of two weeks' duration for breathing apparatus operators;

(*e*) a few one-week courses each year for retained officer instructors and for retained firemen.

A small number of four-week introductory fire prevention courses for leading firemen and sub-officers were provided at this school after the passing of the Offices, Shops and Railway Premises Act 1963[1], but instruction in fire prevention is not part of the normal course provision.

201. The training school at Gullane can cater for 95 resident students and apart from general facilities required for teaching and training purposes, possesses a purpose-built breathing apparatus training building with facilities for alteration in the internal layout. There is also a drill ground with space for the deployment of fire appliances, two drill towers and adequate water supply. There is, however, no purpose-built fire training building in which actual fire conditions can be simulated in order to give students on the various courses experience of fire-fighting operations under realistic conditions. Its provision has not been contemplated so far because of the cost involved.

202. We were concerned to note that the 95 student places available at Gullane have in recent years not always been filled to capacity. This is due to a falling off in the number of recruits in Scotland (see table 10) and to difficulties experienced by Scottish brigades in releasing men from operational commitments to attend courses other than recruit courses. This is in turn due to the widening gap between strength and establishment and to the absence of a sufficient margin in establishment to allow for the secondment of staff for training.

203. The Fire Service College, which was renamed the Fire Service Staff College in 1967, has in recent years provided the following courses:—

(*a*) command courses of 12 weeks' duration for selected officers of assistant divisional officer rank and above;

(*b*) junior command courses of 12 weeks' duration for selected station officers;

(*c*) accelerated promotion courses of 46 weeks' duration for up to 20 men annually selected for advancement to the rank of station officer;

1. 1963 C.41.

(*d*) fire prevention courses—known as Fire Prevention Long Courses—of 16 weeks' duration, mainly for station officers.

The college was established in 1951 at Wotton House, near Dorking, Surrey. Its original capacity of 60 students on a residential basis was increased in 1964 to 70. All these places have usually been taken up. The College provides in the main cubicle-type bedroom accommodation and minimal space for private study. The College is reasonably well equipped with lecture theatres, demonstration rooms, laboratories and a library, but there are no practical fireground facilities.

204. The Fire Service Training Centre, which was established at a former R.A.F. airfield at Moreton-in-Marsh, Gloucestershire, has now been renamed the Fire Service Technical College. Until 1967 the Training Centre, which was used for instructing whole-time, retained and auxiliary firemen in war-time fire-fighting techniques, included an annexe of the Fire Service College. This provided a number of fire prevention and other training courses for junior ranks. In 1963 the Joint Training Committee of the Central Fire Brigades Advisory Councils recommended a major expansion of internal training provision at Moreton-in-Marsh and capital investment of the order of £4 million was authorised for this purpose. The Technical College is now functioning as a separate organisation under its own Commandant and staff and the following courses are being provided there:—

(*a*) accelerated promotion course of 46 weeks' duration for up to 20 men selected annually for advancement to the rank of station officer;

(*b*) fire prevention long course of 16 weeks' duration mainly for station officers;

(*c*) fire prevention course of four weeks' duration for sub-officers and higher grades;

(*d*) advancement courses of three months' duration for men qualified for promotion to sub-officer and station officer;

(*e*) continuation training course of four weeks' duration for station officers of five years' service in the rank;

(*f*) general courses of one week's duration for retrained officers;

(*g*) instructor courses of varying duration for (i) breathing apparatus instructors, (ii) road accident drill instructors and (iii) general brigade instructors.

Courses (*a*) and (*b*) above have been transferred from Dorking. Courses (*g*)(ii) and (iii) started in 1968 and 1967 respectively and (*d*), (*e*) and (*g*)(i) started in 1970. The remainder are of long standing.

205. Part of the extensive building programme for the new Technical College has been completed and we understand that the remainder of the authorised work will be finished by 1973. Meanwhile, some former R.A.F. buildings remain in use for messing, classroom and administration purposes. In addition to excellent student residential blocks and staff houses on or near the site, the College already possesses a modern fireground and specially designed fire buildings of great variety and sophistication. When the building programme is completed, the College will be able to accommodate 470 residential students at one time and is likely to provide the finest general and specialist fire service training facilities anywhere in the world. We have studied with great interest the various reports

produced by the Joint Training Committee of the Central Fire Brigades Advisory Councils during 1962 and 1963, which prepared the plans for the establishment of the Fire Service Technical College, and wish to commend the initiative and far-sightedness of those concerned.

206. With the transfer to Moreton-in-Marsh of the accelerated promotion and long fire-prevention courses the Staff College at Dorking has concentrated entirely on the command and junior command courses mentioned in paragraph 203 and on courses and conferences for chief and assistant chief officers, and will function very much on the lines of industrial and professional establishments of this kind. The Staff and the Technical Colleges provide facilities for students from the whole of Great Britain, about 10% of the places at both Colleges being available for students from Scottish brigades. Both Colleges are staffed by a mixture of fire service and civilian staff. Each College has a Commandant in charge who has invariably been recruited from the ranks of former chief fire officers or H.M. Inspectors of Fire Services. The Deputy Commandants are senior fire service officers. In addition to these two senior officers, the Staff College has a current establishment of seven uniformed staff and two civilian instructors. At the Technical College, in addition to the uniformed Commandant and Deputy Commandant there is now a post of civilian Director of Studies of the same status as the Deputy Commandant. There were until recently 31 uniformed instructor officers and six civilian tutors. We understand that the number of civilian staff is about to be increased substantially and other expansions of staff will follow the establishment of additional courses at the Technical College.

207. The uniformed staff at both Colleges are appointed from amongst serving officers of the fire service and normally serve for a limited period, usually two to three years. They are then expected to return to operational posts in brigades, as opportunities offer. We understand that brigades have usually been anxious to secure the services of former instructor officers at the end of their term of service at a College, although experience to date is confined to a relatively small number of such officers at Dorking only. The Commandants, however, do not return to operational posts, having retired on pension from their former commands before joining the Inspectorate or assuming their appointments at the Colleges.

208. The two Colleges are administered by the Commandants subject to the general direction of a College Board—the same Board serving both Colleges—which has been established under the Fire Services Act 1947. It consists of 16 members, eight of whom are the nominees of the Secretary of State, the other eight representing the interests of fire authorities. Appendix D sets out the present constitution of this Board. The Chairman is appointed by the members from among their number and has invariably been a senior Home Office official. The College Board meets normally about three times during each year and is re-appointed annually by the Secretary of State. We understand that the object of the Secretary of State in re-appointing the Board annually is to ensure that only persons who have an active interest in the fire service are members of the Board. Commandants of both Colleges attend meetings of the Board and participate in discussions.

209. The functions of the College Board are to satisfy itself that standards of accommodation and amenities are maintained at a reasonable level; that appropriate rates of capital and other expenditure are provided; that staff are appointed

with appropriate conditions of service; that balanced programmes of courses are drawn up in good time each year; and that the selection of students for certain special courses, e.g. the command courses, is properly carried out.

210. In practice, however, the College Board has only limited freedom of action in most of these fields. The Home Office has informed us that, as the Colleges were formerly partly and are now wholly financed from central revenues, the standards normally adopted for similar Government training establishments must be followed. Thus, the accommodation and messing standards are laid down centrally; the rates of capital and other expenditure have to be contained in accordance with Government decisions on public expenditure; the staff are temporary or established civil servants, Crown servants or seconded fire service officers employed by the Home Office and appointments have to be made either by the Civil Service Commissioners or the Home Office; and the conditions of service of staff are similarly laid down centrally. The Board is able to offer advice on numbers and ranks of staff and must be consulted before a Commandant is appointed, though their views remain wholly advisory.

211. The College Board's function is further circumscribed by the decisions of the Central Fire Brigades Advisory Councils acting on the advice of their joint training committee which draws up detailed programmes of courses and syllabuses for courses and decides on the types and numbers of students to be admitted to such courses. We deal further with the respective functions of the Board, the staff of the College and the Central Fire Brigades Advisory Councils in paragraphs 265 to 269.

ADEQUACY OF PRESENT ARRANGEMENTS

212. We are conscious that we are writing this report at a time of flux in the training provision for the fire service, when policies decided upon during the past eight years or so are only now coming to fruition. We highly commend the Joint Training Committee of the Central Fire Brigades Advisory Councils on the formulation of these policies which provide more comprehensive and progressive training and education for all members of the service throughout their careers. Nevertheless, in view of the increasing complexity of fire service activities and of our concern, particularly with the continuance of single-tier entry which we have recommended in Chapter VII, about recruitment generally and adequate availability of potential senior officers, we feel that much more has to be done and to be seen to be done. In particular there is need to ensure better and uniform standards of recruit training, to introduce new courses aimed specifically at training men for promotion, to provide a more effective accelerated promotion scheme backed with an appropriate accelerated promotion training course, and to ensure continuation training for those who will not seek or gain promotion beyond fireman or middle officer ranks. As regards teaching personnel and teaching methods, although we have been much impressed by the zeal and dedication of many of the personnel now associated with training activities, we see a need for considerable improvement. In particular, it would seem desirable to bring in more men with experience of teaching and who are able and willing to take a real interest in the problems of the fire service and those who work in it. In the paragraphs which follow, we discuss in detail these further improvements to the training provision for the fire service which we think necessary and arrive at a number of specific recommendations.

RECRUIT TRAINING

213. The first need of the service is to provide appropriate training for new recruits. Once he is operational, the tasks allocated to an individual fireman cannot in general be adjusted according to his experience and no-one can foretell whether response to a particular fire call will reveal a situation simple to deal with or one involving great danger or difficulty. In the latter situation, a poorly-trained fireman could clearly be a menace to himself and to others.

214. The inadequacy of present arrangements for recruit training has been recognised for some time. In 1962 the Training Committee of the Central Fire Brigades Advisory Council for England and Wales produced a report which included recommendations on recruit training. This was accepted by the Advisory Council, and stated *inter alia* "... there should, therefore, be no marked variation in the nature of the men's initial training. Ideally all the men recruited annually should receive an identical course, under uniform conditions, and with a common standard of instruction. Such training as may be necessary to meet special local conditions should be considered as supplementary and left to the discretion of the chief officer of the brigade. . . . the training system should enable every new entrant to be posted direct to a training school and not first to a station. . . . all firemen on passing out from a recruit training school should be qualified to a nationally accepted standard. . . . it should be a requirement that an individual must have taken an instructor's course before being appointed an approved instructor". We entirely endorse these requirements as sensible and necessary.

215. Following this report, the County Councils Association, the Association of Municipal Corporations and the Greater London Council commissioned an inquiry during 1965 by Sir Harold Banwell (former Secretary of the Association of Municipal Corporations and a member of our Departmental Committee) and Mr. A. Abel (former County Treasurer of Durham) to inquire into the whole question of local fire service training facilities in England and Wales. The Banwell/Abel Report of April 1966 analysed in detail the provision of the then 15 area training schools in England and Wales used largely for recruit training and to some extent for continuation training of members of brigades. The Report concluded that of the 13 existing training schools outside Greater London only two were of a kind suitable for development into a training centre with satisfactory standards for future needs and that even these centres would require additional expenditure and resources. The Report drew attention to the considerable variations between different centres as regards standards of training, unit costs and the extent of their attachment to operational fire stations. It also emphasised their very uneven geographical distribution, a difficulty which is complicated by the fact that the choice by fire authorities of training centres for their recruits is made more on grounds of cheapness than of geographical proximity and the facilities provided. The Report finally recommended the establishment of five regional training centres for recruits with the possibility also of their providing continuation training. The five centres did not allow for the training needs of London which were then under review by the newly-created Greater London Council.

216. The County Councils Association approved the Banwell/Abel Report in principle, but the Association of Municipal Corporations concluded that a decision on it should be deferred in view of the setting up of the Departmental Committee. They subsequently commended the Banwell/Abel Report to us for

careful study. The Greater London Council offered no objection to the implementation of the Report's recommendations.

217. We have had the benefit not only of the Banwell/Abel Report but also of hearing the views on recruit training of many witnesses. We have seen at first hand some of the present training facilities and have examined the statistical data relating to all existing centres. We concluded that the present recruit training arrangements as carried out at 14 centres leave much to be desired. None of the centres has more than minimal facilities for simulating actual fire conditions. The quality, nature and range of training is variable and in some cases inadequate. With the possible exception of London, none of the centres is viable in size or as regards economic use of scarce training staff. The present arrangements provide for a relatively high degree of local independence, but only at the expense of costly over-provision of training places; 1,260 places compared with our estimate of a requirement of 560 in Great Britain as a whole in the foreseeable future.

218. We are confident that recruit training would have been greatly improved by early implementation of the Banwell/Abel Report, but our investigations lead us to believe that a still greater degree of centralisation would be even more beneficial. We see considerable merit in a proposal put to us in evidence by the Home Office that there should be a single central recruit training school for England and Wales. This is the only certain way to ensure uniformity of the nature and extent of recruit training and, even if it catered for the whole of Great Britain, it would not be unwieldy in size. A single recruit training school would call for a minimum number of instructors who could be of the highest calibre, and expenditure on really sophisticated facilities for simulating actual fire conditions in a variety of buildings could be justified.

219. Subsequent to their becoming aware of the Home Office proposal for a single recruit training centre, the local authority associations and the Greater London Council jointly submitted additional evidence to us indicating unanimous acceptance of the principles outlined in the Banwell/Abel Report and urging that they should be implemented. They have expressed their willingness to engage in further discussions with the Home Office concerning the number and siting of various schools; the arrangements for administrative control; the financing and sharing of costs and the transitional arrangements that might be made pending the establishment of a new pattern of recruit training schools. These bodies, however, are against the centralisation of recruit training facilities much beyond that recommended in the Banwell/Abel Report on the following grounds:—

(*a*) the successful application of the junior fireman scheme by a number of authorities has lessened the requirement for training of inexperienced recruits;

(*b*) a centrally run school will not necessarily be less expensive than a number of area training schools;

(*c*) whole-time recruits, many of whom are young married men, often wish to be able to go home at weekends;

(*d*) a central recruit training school would increase travelling costs for most recruits and lower morale;

(*e*) area training schools could be made more viable by including some continuation training in their activities;

(*f*) the Scottish training school functions satisfactorily, although it is of limited size;

(*g*) the importance of local authority involvement in control of an important aspect of the service for which they are responsible as a whole and the need for all fire authorities in the catchment area of a particular training school to be represented on the management body.

Our comments on these points are set out below.

220. We have already indicated in Chapter VII that the junior fireman scheme has not been a success in terms either of quantity or quality and have recommended that it should be discontinued.

221. With regard to costs, a detailed exercise has been carried out at our request to compare the cost of recruit training schools on the following basis:—

(*a*) six residential recruit training schools for England and Wales, comprising five for specified areas which would take 75 students each, and one for London which would take 125;

(*b*) six non-residential area schools of similar size;

(*c*) one central residential school for England and Wales providing 500 places.

The annual running cost estimates for these three types of recruit training schools, including amortised charges for building, furniture, fireground and ancillary accommodation, appliances and equipment show that there is little difference in the cost of the six residential schools compared with six non-residential schools. Although this may appear surprising, we are satisfied that it is adequately explained by the fact that about three-quarters of the recruits attending one of the area training schools would not in any event be able to live at home during the working week and the cost of lodging and travel has been taken into account. On the other hand, the cost of a central residential recruit training school would be about 23 % cheaper than either of the other two alternatives. This figure takes into account the cost of recruits travelling to and from a central establishment at the beginning and end of the course. Even if provision were made for travelling costs to be met on two further occasions during a 12 week course, so enabling recruits to go home for a long weekend at least once a month, the cost advantage would still be of the order of 21 % or £120,000 per year.

222. We accept that there is some disadvantage in a central training school from the point of view of the travelling distances for many recruits. We are doubtful, however, whether this would have significant adverse repercussions on morale, the more so since in any event with five or so training centres most recruits would be required to live away from home during the working week. Moreover, we feel that from the standpoint of morale alone a central school offers important compensating advantages. For example, we consider that the need for a high degree of discipline in the service is most likely to be appreciated and accepted when it is presented to all recruits in an identical way at a central residential school by the most experienced instructors and against the background of realistic fire-fighting exercises.

223. For continuation training to be carried out effectively in a number of regional centres, the facilities of each of them would have to be substantially augmented. In any case, there is advantage in concentrating continuation courses at the Technical College as we propose in paragraphs 239 and 240.

224. We understand the concern of local authorities that more centralisation would involve some loss of their control over recruit training. In this respect, however, such centralisation would only bring recruit training into the same position as other training activities in the service carried out at the Staff and Technical Colleges, and the special interest of fire authorities in all training matters can be well looked after through their strong representation on the Central Fire Brigades Advisory Councils and the Joint Training Committee, which have a major influence on policy. In any event individual fire authorities could have only limited executive and managerial control of area training schools proposed in the Banwell/Abel Report and we do not think that such limited control should be a crucial issue in determining the policy on the future method of recruit training.

225. In their supplementary evidence the local authority associations and the Greater London Council say nothing about the more economic use of skilled instructors which would be possible at a central recruit training establishment. We have no doubt that a central recruit training establishment would yield financial saving on staff provision (which is not allowed for in the estimates in paragraph 221 above) while at the same time ensuring that the fewer instructors required would be of the highest quality.

226. We therefore RECOMMEND that recruit training for England and Wales should be provided in a central training establishment as soon as the necessary facilities can be provided. Present estimates suggest that such an establishment should provide a total of about 500 places for England and Wales. We further RECOMMEND that the 14 training centres in England and Wales should be phased out when the new central facilities come into existence.

227. We have considered carefully whether Scotland, with its separate legislative provisions, should have a separate recruit training establishment. As we have pointed out in paragraph 201, the training school at Gullane, which is about the same size as each of the area schools proposed for England and Wales, has no purpose-built fire training building. Moreover, there is no intention to provide fully comprehensive training facilities in Scotland in the foreseeable future because Scottish fire authorities already use, and intend to continue to use, the facilities at the Fire Service Staff and Technical Colleges. In these circumstances, all but one of us feel that the existing establishment at Gullane, though it has done good work over a period of years, is much too small to remain an economic unit in the future, and that the additional capital expenditure which would be required to bring it even reasonably close to the standard of recruit training at the proposed centre for England and Wales would not be justified. We also feel that there is something to be gained by recruits from all parts of Great Britain having an opportunity to mix and to exchange experience during their training periods. The majority of us, therefore, RECOMMEND that there should be one central recruit training school for the whole of Great Britain and that Gullane should be phased out along with the 14 centres in England. A note of dissent from Dr. Macfarlane is attached at the end of our report.

228. We see great advantage in associating the central recruit training school with the new Fire Service Technical College, Moreton-in-Marsh. Adequate land appears to be available and, although additional residential accommodation for

recruits and for staff would have to be provided, this would be no more expensive there than anywhere else. The Technical College has very extensive fireground facilities which are unlikely to be fully used for the College's existing commitments. The additional fireground facilities required specially for recruit training would be marginal and relatively cheap. We see advantage in letting recruits see at first hand the sophisticated and advanced facilities and equipment at Moreton-in-Marsh so that they can appreciate the comprehensive nature of training facilities now available in the service and their significance with regard to promotion opportunities. We also believe that there would be merit in the social mixing which would take place outside instructional time and the opportunities for corporate life offered by a much larger establishment. We therefore RECOMMEND that an early detailed study be carried out to establish the cost and implications of combining the central recruit training school with the Fire Service Technical College. This investigation should pay particular attention to the problem of domestic and ancillary staff, which may present some difficulties in a largely rural area. We believe that provided these problems can be resolved, if necessary by providing daily transport to and from the College, our proposal is both viable and desirable.

229. We have received conflicting evidence concerning the desirability of carrying out recruit training and training of officers in the same establishment. Those who oppose such an association of recruit and officer training do so from a conviction that the hierarchy of command in brigades makes it desirable to separate both the training arrangements and the social and spare-time activities which accompany them. We prefer to accept the views of those who, while recognising that most of the instruction is bound to be organised separately for different groups of students, see merit in a measure of social mixing between men of different ranks provided that this is not forced upon them. We do not feel that this is a matter crucial enough to stand in the way of transferring recruit training to the Technical College, if the investigation we propose shows it to be a viable proposition.

PLANNED OPERATIONAL EXPERIENCE

230. However good and effective future recruit training facilities may be, there will always remain the need for firemen to gain as quickly as possible a wide experience of actual fire-fighting. The need for this is well recognised in the service in terms of drill, training at station level and exercises arranged at brigade or divisional level. Proper attention needs to be given by an officer of adequate seniority in each brigade to the systematic training of firemen of all ranks during their turns of duty and by secondment to courses. We believe that the larger brigades will have an officer structure which will permit of an officer of adequate seniority and experience being in full-time charge of these plans.

231. Men posted to stations in densely populated urban areas are likely to get a wide experience of fire-fighting reasonably quickly but this will rarely apply to those posted to stations in more rural areas. Arrangements should, therefore, be made to ensure that firemen and junior officers are so deployed that their subsequent career is not inhibited by lack of experience during their early years of service. Local conditions vary and a uniform scheme would not be practicable. We do, however, RECOMMEND that chief officers should regard it as one of their responsibilities to arrange that firemen and junior officers have the opportunity of serving in fire stations with a high call-out rate in high risk areas, either by

movement within their own brigades or by arranging secondments to other brigades which have the appropriate experience to offer. We would hope that fire authorities generally would be sympathetic to such a scheme and if necessary establish supernumerary posts to provide for it.

FIRE STATION TRAINING

232. The main element of training given to firemen while they are on duty at fire stations is drill. We have been impressed by the consistently high standard achieved. We see no need for any radical change in drill practice arrangements or in the system for keeping them under review by the Central Fire Brigades Advisory Councils. Apart from drill, other station-based training varies greatly in the extent to which it is provided and in its effectiveness. Training of this sort is bound to be subject to interruption when emergency calls are received on duty shifts, and the working conditions in fire stations are frequently not such as to foster serious habits of study either for examinations or for acquiring better knowledge of the job. Some useful progress can be made by short courses organised on a brigade basis, and will be easier when larger brigades have been formed and specialist officers are available to guide these activities. It would, however, not be reasonable to expect each of the 770 fire stations in Great Britain at which whole-time firemen serve to provide a fully-effective educational and training centre for the staff posted there.

233. Inquiries amongst a typical selection of brigades have suggested that during any one week an average of one and a half hours is allocated for drills and a further one to two hours for academic and other training. Even in brigades where the greatest enthusiasm exists, the amount of time regarded as reasonable for training other than drill is about three hours weekly. We accept that one and a half to three hours a week is probably all one can expect to be devoted to such training, but believe there is scope for using this time more effectively than hitherto.

PROGRAMMED LEARNING

234. We are therefore greatly interested in the plan to introduce programmed learning at fire stations, and welcome the establishment of a Programmed Learning Unit directly responsible to the Fire Department of the Home Office which has been set up at the Fire Service Technical College. A small steering committee under the chairmanship of Professor K. Austwick, Professor of Education at Bath University of Technology, is guiding this development. The unit consists at present of the following staff:—

1 systems analyst/head of Unit
1 programme manager
5 programmers/senior programmers
2 extra-mural tutors
1 clerical officer
2 typists/vari-typists.

We understand that five further vacancies for programmers will be filled in due course.

235. We feel that, since firemen in each brigade are dispersed over many fire stations and the provision of sufficient tutorial staff for them is virtually impossible, programmed learning techniques, with appropriate monitoring and feedback arrangements, offer the best prospects of improving training at fire stations. The Programmed Learning Unit has recently produced its first two programmes, one on basic English and communication, and the other on arithmetic, and further programmes will be produced during the next few years. Some chief and senior officers may have to be persuaded of the value of the new system, and we were therefore glad to note that the Unit includes two peripatetic tutors whose function is to visit brigades and explain the new facilities.

236. Although we agree with the basic objectives of the Unit, we consider it unfortunate that it had to start work before detailed job analyses of the duties appropriate to the various ranks of the service had been made. In other connections we ourselves have been somewhat handicapped by the absence of such analyses. The Unit is aware of this need and is itself active in this field. We were also glad to note that the Home Office has recently commissioned a review of the examination and promotion system, including a job evaluation study, which is being carried out by the School of Education of Bath University of Technology. When the results of this investigation are available, we would expect it to have repercussions on the work of the Programmed Learning Unit and on other detailed arrangements for training and preparation for promotion.

237. When the Programmed Learning Unit has produced a comprehensive range of programmes, it is intended that some should be in a form suitable for pre-course preparation for courses at the Technical College. It is hoped that in this way these courses can be shortened without reducing the effectiveness of the tuition, which might even be enhanced. This would have the beneficial effect that students would be absent from their brigades for shorter periods.

238. We see advantages in the Unit being at the Technical College because of the opportunities which this provides for discussion and evaluation of programmes with instructors and students. We RECOMMEND that if the proposals in paragraphs 268 and 269 for the management of the College at Moreton-in-Marsh are implemented, the Unit should become an integral part of the College and that the Head of the Unit should be directly responsible to the Director of the College instead of to the Home Office Fire Department.

CONTINUATION TRAINING

239. Experience in recent years in industry and other employments has shown that given the necessary facilities for further education and training on the job, many men in their twenties or thirties can develop to an extent considerably beyond what might have been expected from their school records. In view of the relatively low formal educational attainments of the majority of recruits and members of brigades, the difficulty of attracting better qualified men into the service, and our recommendation that single-tier entry should continue, it becomes of vital importance that the fire service should develop its internal educational and training facilities to the maximum. Experience of the Fire Service College and indeed the abilities and aptitudes of many of the senior officers whom we have met leads to the same conclusion.

240. We RECOMMEND therefore that the Fire Service Technical College should as soon as possible provide continuation courses for all ranks of the fire service up to and including station officer. Such courses should be devised specifically for men of each rank, with a programme appropriate to the functions and duties of that rank. Continuation training courses should be additional to, and separate from, courses for promotion. We consider that each member of the fire service up to and including station officer should attend a continuation course at least every five years, unless he has attended a promotion course during that period. The length of these courses can be determined only in the light of experience, but as a means of estimating the number of places required at the College for continuation courses, we have assumed that each course might last four weeks. On this basis the College would need a capacity of about 500 places for continuation courses alone. When regular continuation training is provided, it may be possible to shorten some of the specialist courses.

ADVANCEMENT COURSES

241. Advancement courses for men seeking promotion to sub-officer and station officer ranks respectively have recently been started at the Technical College. The courses are of three months' duration and are restricted to men who have already passed the relevant promotion examination. Their object is to train men in the duties and responsibilities of the rank to which they aspire.

242. While we consider such training to be very necessary, we believe that much more must be done to open up opportunity for promotion to a wider range of men. We consider this to be an essential measure for making the fire service more attractive both to men already in it and to potential recruits, including those with higher than average educational attainment. We RECOMMEND that "promotion courses" based on new concepts and objectives should be provided at the Technical College. Each course should be open to men of a particular rank, i.e. fireman, leading fireman or sub-officer, considered to have potential for promotion to the next higher rank but who have not passed the relevant promotion examination. Admission to the courses should be by selection based on a man's operational performance to date, his personal qualities and his keenness for promotion as indicated by his willingness to engage in private study and to take advantage of programmed learning.

243. Each promotion course should be devised, with pre-course study, as a specific preparation for the statutory promotion examination to the next higher rank and should include a general educational component and familiarisation with the duties and responsibilities of that rank. We believe that such courses would do much to develop latent talents and would result in much more satisfactory pass rates in the promotion examinations which we discuss in Chapter IX.

244. We recognise that when these new promotion courses are introduced it will be necessary to ensure, for at least a number of years ahead, that men who have already passed the relevant promotion examinations are not denied the opportunity of central training in the duties and responsibilities of the higher rank provided in the present advancement courses. This difficulty could be overcome by providing both types of course for the time being.

245. Ideally all three promotion courses should be provided immediately. However, in the immediate future it is likely that consideration of space and facilities at the Technical College will not enable all these steps to be taken simultaneously and we would think it sensible for the manner of implementation of these proposals to be kept under review, particularly in the light of recruitment patterns and vacancies for promotion to various ranks in the country as a whole. Similarly, we would not wish at this stage to recommend firmly the length of each of these promotion courses. We believe that there would be scope for experimentation in this field and particularly so when the Programmed Learning Unit is able to make an impact on pre-course preparation. We recognise that selection of men for the promotion courses could present some difficulty. Selection should not be nearly as rigorous as that for the special accelerated promotion course which we discuss later, but it should be such as to restrict entry to those with a reasonable chance of success. We consider it important that the basis of selection should be defined as clearly as possible, should apply all over the country and be known and understood by all members of the service. We suggest that the Joint Training Committee of the Central Fire Brigades Advisory Councils in conjunction with the Home Office Fire Department and the Director of the Technical College should be invited to lay down guidelines on the principle and procedure for selection and that the actual selection should be the responsibility of the chief officers of brigades.

246. Because of the uncertainty about the length of the promotion courses and about the scale on which they can be introduced in the near future, we find it difficult to forecast precisely the number of places required for them. For planning purposes we suggest that a figure of 200/300 places be assumed.

247. We do not suggest that attendance at one of the new promotion courses at the Technical College should be a pre-condition of promotion or of taking the relevant promotion examination. This would be neither practicable nor desirable. There will always be those, albeit we believe a declining number, who entirely by their own efforts will prepare themselves for promotion examinations and demonstrate their competence for promotion by the standard of their operational service.

ACCELERATED PROMOTION

248. An accelerated promotion course for station officers was introduced in 1964. It is a full-time course of about 11 months' duration conducted until recently at the Fire Service Staff College and now at the Fire Service Technical College. The course is open to applicants who have qualified for station officer rank and are under 35 years of age. Selected candidates may hold the rank of fireman, leading fireman or sub-officer at the time of their selection but are promoted to the temporary rank of station officer on joining the course. After successful completion of the course they return to their own brigades as station officers, supernumerary to establishment if a regular post of station officer is not available. The total number of places each year for this accelerated promotion course is limited to 20 candidates from Great Britain. Since the course came into operation, the average age of selected candidates has slowly dropped to about 28.

249. Any member of a brigade with the appropriate qualifications can apply for admission to the course through his chief officer, who reports on the applicant to the selection panel. Selection is carried out by preliminary written examination followed by extended interviews at the Fire Service College, in which techniques are used similar to those developed for the armed forces and the Civil Service. In 1967, 136 men applied to join the course; 60 of these were called for extended interview, and 18 were eventually selected. These figures are typical of recent years. Admission to this course is, therefore, highly selective. A method of continuous assessment developed by the staff of the Fire Service College is used to determine a man's performance during the course. The existing accelerated promotion scheme has undoubtedly been of value in that since 1964 it has already enabled some men to progress from ranks below station officer to assistant divisional officer and divisional officer ranks. It has not, however, achieved much in the way of accelerating promotion to station officer rank for which it was originally intended. Most of the men selected for the course through the highly selective procedure would in any case have been promoted to station officer rank at an early date.

250. In our view, an accelerated promotion scheme to be worthwhile should be able to achieve the following main objectives:—

(*a*) The early identification of men in the service with outstanding all-round potential and their rapid promotion to station officer rank so that, while still young, they can acquire the necessary experience for promotion to the highest ranks of the service. The provision of station officers as such in sufficient numbers and of the required quality is the object of the third of the "promotion courses" we have discussed earlier rather than of an accelerated promotion course.

(*b*) The recruitment to the service of more ambitious and able men who would otherwise feel that it would inevitably take longer than they were prepared to wait before there was a possibility of their reaching a status and salary which they could reasonably expect to attain in other employments.

We feel that the present accelerated promotion course fails in these objectives because a minimum of five years' service is necessary before entry and because of the insistence on candidates having already passed the statutory station officer examination.

251. We RECOMMEND that the accelerated promotion scheme to station officer rank should be modified as follows. The service qualifications for selection to the scheme should be that a man must have had a minimum of two years' operational experience. An applicant should not be required to have passed any promotion examination or to have been promoted to any particular rank. We consider the latter important because of the known differences of opportunity for promotion in different brigades, which will not necessarily disappear in the future when there are larger and fewer brigades. As with the existing scheme, selection to the accelerated promotion course would be from men applying personally through their chief officer and not by nomination. Selection procedures should be on similar lines to those for the existing accelerated promotion scheme described in paragraph 249 above.

252. We envisage that selection would be rigorous. Men benefiting from this accelerated promotion course will become station officers at an early age and with

comparatively little background operational experience. We entirely accept that a station officer must be capable of taking command at a fire and of being in charge of an operational fire station, and have the confidence of his senior officers and the men under his command. It is of the greatest importance, therefore, that anyone accepted for the accelerated promotion course should be judged to have outstanding all-round potential which can be developed during the course. Although we do not think that the passing of promotion examinations should be a pre-condition, we would expect the educational background of the applicants to be taken into account. Selected candidates would be required to engage in pre-course personal study under the guidance of the Technical College in order to minimise the time spent in relatively elementary work during the accelerated promotion course. The course should be strenuous, both physically and mentally. It should include practical fire-fighting, facilities for which are now available at the Technical College, and training in supervision, as well as training in technical subjects and the related academic studies. There should be suitable project exercises and adequate methods of testing and assessing students' progress throughout the course. Minimum standards of attainment should be prescribed for a man judged to have completed the course successfully.

253. Students would not as at present be promoted to the rank of station officer on joining the course, but should be given allowances to equate their pay with that of the rank of station officer while attending the course. On successful completion of the course, however, they should be guaranteed the rank of station officer as soon as they have passed the statutory promotion examination, from which no exemption should be given. We believe this to be necessary in order that justice can be manifestly seen to be done. Provision should be made for men who have successfully completed the accelerated promotion course to sit the station officer's examination without being required to have passed the leading fireman's and sub-officer's examinations. In addition, some changes in the existing arrangements for holding the station officer's examination once annually may be necessary to ensure that successful accelerated promotion course students may take the examination without undue delay.

254. We make no firm recommendation about the length of the new accelerated promotion course, but believe that it could and should be significantly shorter than the present 11 months' course, possibly about six months. The present course contains a great deal of what can be described as general educational remedial work, and, important though this is, we believe that the pre-course preparation which we envisage should take care of much of it. As we have already indicated, the new course should deliberately be made a strenuous one both physically and mentally.

255. The present course is limited to 20 candidates a year. We hope that with the new scheme there will be a greater number of acceptable candidates and that the limit could be increased eventually to 40. Finally, we emphasise that, while we are recommending a minimum period of two years on operational service before entry to the course, we would not wish applicants with longer experience to be excluded. Indeed the course would benefit from a mixture of students with different periods of operational experience.

FUNCTIONAL TRAINING

256. The Technical College provides the functional courses which we have described in paragraph 204 and is capable of providing other courses from time to

time to meet needs as they arise. We are satisfied that the need for these functional courses is an important and continuing one. At present the courses for brigade instructors are particularly valuable because of the immediate need in brigades of more properly trained instructional staff. With regard to fire prevention courses, we hope that, if our recommendations on continuation training are implemented, the need to include basic fire prevention training in the functional fire prevention courses would be eliminated. Nevertheless, we attach particular importance to the continuation of fire prevention training at the centre in order that members of brigades in different parts of the country should adopt broadly similar working practices and, so far as is reasonably possible, interpret fire prevention legislation uniformly. The rationalisation of fire prevention legislation and the production of national codes of practice which we recommend in Chapter XIV should further assist this process. While occasionally there may have been grounds for criticism in the past, we are satisfied that fire prevention officers generally strike a proper balance between the conflicting claims of safety and those of cost and amenity when making recommendations and enforcing requirements under fire prevention legislation. It is important that this should be done on the same lines over the country as a whole, and we believe that centrally run fire prevention courses will help to bring this about.

FIRE SERVICE STAFF COLLEGE

257. The buildings of the Staff College are of historical interest and are set in beautiful grounds in the Surrey countryside. The general environment, therefore, is pleasant, but both functional and accommodation facilities are limited and some of the latter are not of a high standard. The position cannot be improved without considerable capital expenditure. Moreover, the limited future function of the Staff College and the small number of students who can be accommodated inevitably mean that only a small staff can reasonably be provided. The present teaching establishment of the College is 11 men in addition to the Commandant.

258. In the past year or so the Staff College has concentrated on junior command courses for selected station officers and command courses for selected assistant divisional officers, divisional officers and assistant chief officers. The main object of these courses is to improve the managerial and operational capabilities of the higher ranks of the service. We understand that the Staff College is also to provide study and discussion conferences for senior officers from time to time.

259. We have looked in some detail at the nature and content of the command and junior command courses. They consist predominantly of what we would call supervisory rather than management training and we think that in the main this is appropriate. We consider, however, that especially for the courses for more senior officers a greater amount of management teaching would be beneficial. The inclusion of more work of this nature would increase the staffing needs of the College and we do not recommend the appointment of additional specialists, bearing in mind the uneconomic staffing ratio which already exists.

260. Furthermore, we are concerned that the courses at Dorking of necessity rely on demonstrations of equipment on a very small scale and on demonstrations of models and pictures of actual incidents which are used as exercises. We

do not criticise the staff who have shown commendable initiative in providing varied exercises and material. We are, however, convinced that the junior command and command courses would benefit from having direct access to practical fireground and other facilities of a sophisticated nature. Opportunities for realistic exercises and demonstrations of full-scale equipment now exist at the Technical College at Moreton-in-Marsh. We feel also that it would be of benefit to the officers attending junior command and command courses if, as part of their training, they could take charge of realistically staged incidents on the fireground at Moreton-in-Marsh. In view of all these considerations, we have reluctantly come to the conclusion that, in spite of the fine tradition which has been established at Dorking under successive commandants and staffs, it is now appropriate to transfer the courses held there to the Fire Service Technical College at Moreton-in-Marsh and to phase out the Dorking establishment. We RECOMMEND accordingly.

FIRE SERVICE CENTRAL COLLEGE

261. We have now made a series of recommendations concerning various courses of training in the fire service, all of which we envisage will be conducted at Moreton-in-Marsh. Many questions remain to be answered about the length and detailed planning of individual courses. These we believe to be properly the province of the Home Departments and the Central Fire Brigades Advisory Councils, but we have tried to estimate the likely effect of our proposals on the ultimate size of the institution at Moreton-in-Marsh, which we suggest should be called the Fire Service Central College. Such an estimate at this stage must be very approximate, especially in terms of breakdown of places into individual courses, but we think that the estimate is sufficiently accurate to justify the broad conclusions which stem from it.

262. Subject to the above reservations, therefore, we estimate a need for the following places:—

Recruit training		560
Continuation training, firemen	360	
leading firemen	50	
sub-officers	50	
station officers	30	
	—	490
Promotion, fireman—leading fireman	60	
Promotion and advancement, leading fireman—sub-officer	60	
Promotion and advancement, sub-officer—station officer	40	
	—	160
Accelerated promotion to station officer		20
Fire prevention, long and short		60
Instructors, all kinds		30
Junior command		30
Command		20
Others, including retained officers (see Chapter X)		10
		1,380

Allowing for contingencies and various uncertainties implicit in our analysis, we consider that 1,400 to 1,500 resident student places and a teaching establishment of about 170 should be adequate for the implementation of these plans.

263. Present plans for the Technical College provide for 470 resident students. It is clear that this number will have to be substantially increased, and ample land appears to be available for this purpose. The viability of our proposal depends mainly on the availability of the necessary domestic and ancillary staff. We believe that it would be worthwhile to resolve this difficulty, even if substantial expenditure on transport for the purpose is found to be necessary. Concentration of training in one place would result in compensating financial savings, as well as in major improvement in the quality and uniformity of the training itself. We would wish to emphasise particularly that a number of resident students of the order of 1,400 at any one time does not in itself introduce any difficulty. In comparison with other national educational provisions it cannot be considered very large, let alone excessively so.

264. While we strongly favour a single residential Central College and hope that any practical difficulties will be overcome, we feel it desirable to indicate a possible alternative. If more than one training establishment is found to be inevitable, the College at Moreton-in-Marsh should provide all courses for the middle ranks of the service together with the command courses to be transferred from the Staff College, while recruit training should be provided elsewhere. It would then be desirable for the recruit training centre to be in the Midlands in order to minimise travelling distances for the greatest number of recruits. Such a recruit training centre should still form part of the Fire Service Central College for management purposes. The arrangements for the direction and management of the Central College, described in the next paragraphs, should apply whether or not the physical facilities are on one site. This would not only be economical, but would lead to uniform and progressive training policies and flexibility in the efficient deployment of scarce staff. We note that the new Civil Service College, which is to operate on three widely separated sites, is to be managed in this way.

DIRECTOR OF THE FIRE SERVICE CENTRAL COLLEGE

265. The courses at the reorganised Fire Service Central College will comprise a blend of operational training and a variety of more academic studies. We are convinced that the success of such an enterprise will largely depend on the quality of the person who directs its operations and to whom we now wish to refer as the Director of the establishment. The Commandants of both the Staff and Technical Colleges have invariably been retired chief officers or former members of H.M. Inspectorate. Similarly, the Deputy Commandant has been a uniformed member of the fire service, although a civilian Director of Studies has recently been appointed at the Technical College of a status equal to that of the Deputy Commandant. Bearing in mind the salary levels of the two existing posts of Commandant and the likelihood that the post of Director of the new Fire Service Central College which we have recommended would justify a more substantial salary, we RECOMMEND that the post of Director of the new Fire Service Central College should be open to public competition. We do not rule out the appointment of fire officers but would on balance favour the appointment of able men with wide experience from other walks of life, at any rate during the foreseeable future.

266. The Director, like the heads of other educational establishments, clearly cannot be an expert in every aspect of the subject-matter which is taught at the College. Given the right experience and personality, a Director with imagination, energy and organising ability will be able to give overall direction to the work of the College, relying on his staff for specialist expertise. In particular, a civilian Director would require the maximum support with regard to the training in practical firemanship and the accompanying disciplinary requirements of the service to which, as we have emphasised in our report, we attach the greatest importance. This support could only be provided by staff with extensive fire service experience, and we consider that for this purpose the senior member of the uniformed staff should be Deputy Director of the College.

267. For planning purposes we have estimated that the teaching staff at the College might be about 170. In practice the figure must obviously depend on current requirements and we are satisfied that if present policies are followed and extended to cover future commitments, a satisfactory and economic staffing ratio will be maintained. We are in agreement with the recent policy of appointing more civilian tutorial staff to carry out the work of the College which requires academic training but does not need operational fire service experience. At the same time we consider it most important that the men appointed to these civilian posts should be of a type who will have a real appreciation of and interest in the ultimate objective of producing really efficient firemen and fire officers, and who will co-operate fully with the uniformed instructors as colleagues and partners in this objective. We believe that a good deal of study of teaching methods and deployment of academic and uniformed staff will have to be undertaken at the College in order to achieve the best results. It is partly with this in mind that we think there would be advantage if the Director of the establishment were a person from outside the service, with a broad experience of education and essentially with an understanding of the needs of a practical service.

MANAGEMENT OF THE FIRE SERVICE CENTRAL COLLEGE

268. We RECOMMEND that the greatest possible freedom to devise the detail of courses and to adapt teaching to developing situations should be given to the Director of the College. At the commencement of our inquiry we had a certain amount of evidence that syllabuses and schemes of work were laid down centrally through the Central Fire Brigades Advisory Councils to an extent which appeared to us excessive. We were glad to note that, even as our inquiry progressed, a greater measure of flexibility and discretion was allowed to the Commandants in post. While we recognise that broad policy decisions have to be taken by the Secretary of State, normally on the advice of the Central Fire Brigades Advisory Council, we urge those concerned to confine such advice to issues of basic policy and even on these issues to take the views of the College into consideration. We feel that this is necessary if staff of the desired quality is to be attracted and retained.

269. Earlier, in paragraphs 208 to 211, we have referred to the composition and function of the College Board responsible for the Staff and Technical Colleges. The functions of the present Board appear to be similar to those of the managers of a school and its powers for decision-taking are extremely circumscribed. We

believe there would be value in a College Board with increased responsibility and decision-taking powers, and that it should include a number of members chosen because of their general experience in matters of education and training. We appreciate the proper concern of the Home Office for financial control and the need in a central government establishment to adhere to certain establishment rules. Nevertheless, we believe that the principle of public accountability which necessarily falls on the Permanent Under-Secretary of State at the Home Office can be discharged by reserving to the Department those powers of approval of annual estimates and global sums of expenditure, which determine the broad pattern of education and training provision, coupled with appropriate audit arrangements. More detailed decisions on expenditure at the College should be left to the College Board. We understand that the Secretary of State for Education and Science has recently decided that wider functions and responsibilities should be given to the Governing Bodies of the new Polytechnics and Colleges of Further Education and that Parliament has provided enabling powers for this purpose in the Education (No. 2) Act 1968.[1] We consider that the functions of the new Central College are much more closely related to these higher educational establishments than they are to schools and feel that the responsibilities and decision-taking powers of the College Board should be similar to those of the Governing Bodies of those establishments. We therefore RECOMMEND that the College Board, renamed the Governing Body and with broadened membership, should be given powers and responsibilities more akin to those of the Governing Bodies of the new Polytechnics and Colleges of Further Education.

270. We have previously recorded (paragraph 199) that the existing Colleges at Dorking and Moreton-in-Marsh have been financed entirely by the central Government since 1967, since it was felt that the administrative expenditure necessary for apportioning the very slight reductions of rate support grant involved among the local authorities responsible for the 142 fire brigades was not warranted. Our recommendations will clearly involve a significant rise in central training expenditure and some reduction in the expenditure by fire authorities, for instance on recruit training. At the same time, we have made it clear that we expect fire authorities collectively to be firmly involved in the determination of training policies, through membership of the Central Fire Brigades Advisory Councils and of the Governing Body of the Central College.

271. We therefore RECOMMEND that discussions should take place between the central Government, the local authority associations and the Greater London Council, with a view to evolving a method of sharing the cost of the Central College between the Exchequer and fire authorities. It is not in our remit for us to suggest the precise mechanism of such cost sharing, but provided that it is one that does not give individual authorities power to veto expenditure we believe that the principle is sound and should be adopted.

USE OF PUBLIC FACILITIES FOR FURTHER EDUCATION

272. We have examined schemes developed by a few brigades in England, Wales and Scotland whereby serving firemen in the lower and middle grades are encouraged to attend day release courses at Colleges of Further Education maintained by local education authorities. The courses in question have provided

1. 1968 C.37.

elementary scientific and technical education combined with some liberal studies aimed at personality development. No doubt some of these schemes have been worthwhile, although others have failed to hold the interest of firemen because of the difficulty of providing special courses suitable to their requirements. We consider that in favourable circumstances a few schemes of this kind may continue to receive support, but that they are no substitute for the in-service training schemes we have discussed above and are unsuitable for use on a national scale.

HIGHER EDUCATION

273. We have also considered the desirability of providing first degree and higher degree courses in fire engineering, such as have been considered by the Universities of Edinburgh and Bristol and University College, Swansea, of the University of Wales. We have formed the conclusion that so far as the fire service is concerned a first degree course in fire engineering is unlikely to be of significant value. We say this because we believe that the degree of specialisation implicit in a first degree course in fire engineering *per se* is not appropriate, and indeed would run somewhat counter to the prevailing view that first degree courses need to be more, rather than less, broadly based. Moreover, few members of the fire service are likely in the foreseeable future to possess the qualifications necessary for admission to such a course.

274. An alternative proposal, which we understand is being discussed within some universities, is for a post-graduate diploma in fire engineering following upon a first degree course in a scientific or technical subject. Here again, we do not believe that the fire service is likely to provide more than an occasional candidate for such a course. The case for degree courses of any kind in fire engineering seems to us to depend on the interest of industrial organisations, particularly those manufacturing fire protection equipment, and insurance companies who are concerned with the assessment and inspection of risks. Whether such courses are required is not a matter on which we feel able or qualified to pronounce.

275. There remains the question which may arise of a member of the fire service who wishes to study for a degree. Some of us who had the opportunity of discussing fire service matters in the United States of America were impressed by the relatively large number of such cases in that country, where there is, of course, a much greater availability of correspondence and other private or part-time study courses leading to a degree, for which the entry qualifications are less rigorous than in this country. In general, the fire authorities in the United States of America encourage these activities and assist financially to varying extents. In this country, we are concerned with the very few men who possess or have obtained through their own efforts the qualifications required for admission to a degree or diploma course. We consider that such men, provided that they have given satisfactory service, should be encouraged irrespective of the subject matter of the degree course which they wish to take. We would also wish every encouragement to be given to men who wish to obtain a degree or equivalent qualification while remaining operationally active, and in this connection draw attention to the recent establishment of the Open University, which will make such an aim very much more feasible than hitherto for men without traditional academic qualifications at the outset. We feel that this encouragement should be in practical terms and should cover all expenses in terms of fees, books and travelling expenses, as

well as the normal pay of the man's rank while he is absent from work, which could be for a period of up to three years, and in the case of the Open University courses would involve short periods of residential tuition. We believe that the procedure for considering applications for leave of absence and for financial assistance for the purpose of taking a degree or its equivalent should be organised centrally through the Fire Department of the Home Office, and that the costs to which we have referred should be borne centrally.

TRAINING OFFICER

276. We RECOMMEND that each fire brigade of the future should have a senior and experienced officer designated as training officer who would report direct to the chief officer and be responsible to him for all training and educational requirements in the brigade. It is essential to the success of the very comprehensive training schemes which we have recommended that this function should be efficiently discharged, with appropriate staff development policies and records maintained in each brigade.

ESTABLISHMENT ALLOWANCE FOR TRAINING

277. We have had evidence about the difficulties facing individual fire brigades releasing men for training and education courses at the Fire Service Colleges, because establishments are not adequate to enable chief officers to release such men and at the same time to maintain operational efficiency. We have not been able to assess these difficulties numerically because the Secretaries of State have had no control over upper limits of establishments since 1959. We believe, however, that there are considerable differences in the extent to which individual fire authorities have allowed in their establishment for a percentage of men to attend training courses. We think that these differences are too great for us to recommend that a fixed percentage should be added to present establishments in order to allow for men to be released for training courses. Nevertheless, every establishment should include such a percentage, both in the interests of operational efficiency and as an incentive to the recruitment of more able men who will want to see clear paths for further education, training and advancement.

278. We therefore RECOMMEND as a first step that each fire authority should review critically its establishment for whole-time men in the light of current standards of fire cover, of the needs of their area and of advice from the Home Office Fire Department. Subject to this, we would RECOMMEND that the establishment of each brigade should contain an appropriate allowance, which we estimate to be at about 7½%, to provide for systematic secondments of staff for the various courses we have proposed. The allowance should be the subject of regular review.

CHAPTER IX

PROMOTION AND PROMOTION EXAMINATIONS—WHOLE-TIME MEN

THE PRESENT POSITION

279. The existing rank structure of the fire service in Great Britain is as follows[1]:—

Fireman
Leading Fireman
Sub-Officer
Station Officer
Assistant Divisional Officer
Divisional Officer—Grade III
Divisional Officer—Grade II
Divisional Officer—Grade I
Assistant Chief Officer (Assistant Firemaster in Scotland)
Chief Officer (Firemaster in Scotland)

Not all these ranks, particularly the senior ones, are represented in every brigade.

280. A pre-requisite of promotion to the ranks of leading fireman, sub-officer and station officer is the passing, subject to a number of conditions, of the appropriate examination for each rank. The position is summarised in the table on page 127 which also shows some minor differences in the promotion regulations for England and Wales, and for Scotland.[2]

281. Fire authorities may give exemption from (*a*) and 1. if they are satisfied that the candidate has attained an educational standard at least as high as that required to pass this examination. Entry to examination (*b*) and 2. is subject to having completed two years of operational service. Entry to examination 3., in Scotland only, is dependent upon a pass in 1. and 2. Entry to examination (*c*) is subject to having passed (*a*) and (*b*), while entry to examinations 4. and 5. is subject to having passed 1., 2., and 3. Entry to examination (*d*) is subject to having passed (*c*) and entry to 5. is subject to having passed 4. Entry to examination (*e*) and 6. is dependent on having passed examinations (*c*) and (*d*) or 4. and 5. respectively.

282. It will be seen that the regulations for entry to examinations in Scotland are more demanding in one respect. The promotion examination for the rank of leading fireman in Scotland is divided into three parts, with a requirement that the third part, namely the practical examination, may not be attempted until a pass

1. We have not included the rank of Deputy Assistant Chief Officer which was introduced in the London Fire Brigade following the creation of the Greater London Council.

2. S.I.'s 1965 No. 577, 1967 No. 1689 and 1970 No. 102 for England and Wales and S.I. 1968 No. 1745 (S.159) for Scotland.

Rank	*England and Wales*	*Scotland*
Leading Fireman	(*a*) written educational examination (*b*) oral and practical technical test	1. written educational examination 2. written technical examination 3. practical examination
Sub-Officer	(*c*) written technical examination (*d*) practical examination and oral test	4. written technical examination 5. practical examination
Station Officer	(*e*) written technical examination	6. written technical examination

has been obtained in the written educational examination and the written technical examination.

283. In each case the station officer's written technical examination is conducted by a statutory Examinations Board, separately constituted for England and Wales on the one hand and for Scotland on the other, and provision is made for a pass in the graduateship examination of the Institution of Fire Engineers to be accepted in lieu of the written technical examination conducted by the Boards. This latter exemption is referred to again in paragraph 300.

284. The appointments and promotion regulations for England and Wales provide for a Fire Services Central Examinations Board of specified composition and a membership of 21, including a chairman appointed by the Secretary of State. The Regulations for Scotland provide for the setting up of a separate Scottish Examinations Board comprising 18 members, including the chairman who is appointed by the Board from amongst its members.

285. The Board for England and Wales has statutory responsibility in respect of the written technical examination for the rank of station officer. Since 1961, the Board has accepted responsibility for setting the question papers for the written technical examination for the rank of sub-officer and, since 1965, has conducted the whole of this written examination. The latter arrangement was arrived at on the invitation of the Secretary of State and by general agreement amongst all fire authorities in England and Wales, but does not have statutory force. The Board has no responsibility for the educational examination or the oral and practical test for the rank of leading fireman, or for the practical and oral tests for the rank of sub-officer. These are conducted by fire authorities or by local examination boards appointed for the purpose by groups of fire authorities. In Scotland, all six examinations, other than the practical examination for the rank of leading fire-

[illegible] are conducted by the Scottish Board, while the practical examination for leading fireman is conducted by fire authorities under the Board's direction.

286. Notwithstanding the differences described above, a man who has passed the promotion examination for any one rank either in England and Wales or in Scotland is equally eligible for promotion in the other countries.

287. Statistics summarised in tables 12 to 17 and figures 13 and 14 show a most disappointing percentage of passes in the national examinations for sub-officer and station officer, particularly in England and Wales. In England and Wales in 1969 the pass rate for the station officer examination was 19% and that for the sub-officer examination 13%. The corresponding figures for Scotland were 38% and 57%. These figures include candidates who took single papers, having been referred at previous examinations. The indication is that the pass rate in the two examinations of candidates who took all the papers is even lower. We have no comprehensive data on the pass rate in leading fireman examinations but have had written and oral evidence to the effect that these results also give cause for concern. Moreover, after examining a sample range of examination papers, we are of the opinion that the standards of the written examinations are not high and this increases our concern about the low pass rates. It would be in the interests of the service for the examination standards to be raised gradually if and when the improved and extended training arrangements which we have recommended make this practicable.

288. It is impossible to say at this stage the extent to which the disappointing examination results reflect a very low educational standard in the candidates, some unsuitability of the examinations themselves for the purposes for which they are required, or the inadequacy of training for them. In this context we welcome the inquiry which the Home Office has commissioned at Bath University of Technology and to which we have already referred in paragraph 236. It would have greatly eased our task if the detailed job evaluation and study of promotion procedures and examination objectives, which this investigation is to make, had been carried out in time to enable us to take the results into account. We hope that in due course this study will produce information of value to the Central Fire Brigades Advisory Councils and the Secretaries of State.

RANK STRUCTURE

289. Before considering possible changes in promotion arrangements, we felt it necessary to examine the rank structure of the service in relation to the requirements of different types of brigades and particularly the larger brigades which we have recommended, to decide whether any changes in the number of ranks were needed. We have concluded that all ranks up to and including station officer are essential and that there is no need for any additional rank in this range. A question does arise, however, in connection with busy stations in urban areas which require a station officer on each watch. We think that sound principles of management require the designation of one of them as the senior to be generally responsible for the administration of the station, for which he should be paid a responsibility allowance.

TABLE 12

STATION OFFICER EXAMINATION

FIRE SERVICES CENTRAL EXAMINATIONS BOARD—ENGLAND AND WALES

Year	*Total no. of candidates*	*Pass*		*Reference*		*Fail*		*Candidates who took all papers*	*Pass*		*Reference*		*Fail*	
		No.	*%*	*No.*	*%*	*No.*	*%*		*No.*	*%*	*No.*	*%*	*No.*	*%*
1963	1,034	245	24	157	15	632	61	872	116	13	131	15	625	72
1964	1,141	200	18	154	13	787	69	994	98	10	127	13	769	77
1965	1,220	202	17	160	13	858	70	1,076	103	10	120	11	853	79
1966	1,176	264	22	187	16	725	62	1,042	155	15	163	16	724	69
1967	1,232	175	14	156	13	901	73	1,056	76	7	92	9	888	84
1968	1,290	250	19	162	13	878	68	1,154	145	13	149	13	860	74
1969	1,263	255	20	185	15	823	65	1,115	153	14	143	13	819	73
7-year average	1,194	227	19	166	14	801	67	1,044	121	12	132	13	791	75

TABLE 13

SUB-OFFICER WRITTEN EXAMINATION

FIRE SERVICES CENTRAL EXAMINATIONS BOARD—ENGLAND AND WALES

Year	*No. of candidates*	*Pass*		*Fail*	
		No.	*%*	*No.*	*%*
1966	2,725	652	24	2,073	76
1967	2,687	413	15	2,274	85
1968	2,969	381	13	2,588	87
3-year average	2,794	482	17	2,312	83

TABLE 14

STATION OFFICER EXAMINATION

FIRE SERVICES (SCOTLAND) CENTRAL EXAMINATIONS BOARD

Year	*No. of candidates*	*Pass*		*Reference*		*Fail*	
		No.	*%*	*No.*	*%*	*No.*	*%*
1963	80	34	43	—	—	46	57
1964	82	18	22	—	—	64	78
1965	113	50	44	—	—	63	56
1966	113	39	35	—	—	74	65
1967	140	58	41	—	—	82	59
1968	120	46	38	18	15	56	47
1969	160	46	29	21	13	93	58

TABLE 15

SUB-OFFICER WRITTEN EXAMINATION

FIRE SERVICES (SCOTLAND) CENTRAL EXAMINATIONS BOARD

Year	*No. of candidates*	*Pass*		*Reference*		*Fail*	
		No.	*%*	*No.*	*%*	*No.*	*%*
1966	149	74	50	—	—	75	50
1967	122	69	57	—	—	53	43
1968	206	118	57	—	—	88	43
1969	162	84	52	—	—	78	48

TABLE 16

GRADUATESHIP EXAMINATION

INSTITUTION OF FIRE ENGINEERS (ENGLAND, WALES AND SCOTLAND)

Year	*Candidates**	*Pass†*	
		No.	*%*
1963	219	67	31
1964	206	86	42
1965	261	114	44
1966	288	67	23
1967	384	128	33
1968	423	114	27
1969	436	128	29

TABLE 17

STATION OFFICER EXAMINATION

SUMMARY OF NATIONAL POSITION

Year	*Candidates*				*Pass*				
	England and Wales	*Scotland*	*I F E*	*Total*	*England and Wales*	*Scotland*	*I F E*	*Total*	*%*
1963	1,034	80	219	1,333	245	34	67	346	26
1964	1,141	82	206	1,429	200	18	86	304	21
1965	1,220	113	261	1,594	202	50	114	366	23
1966	1,176	113	288	1,577	264	39	67	370	23
1967	1,232	140	384	1,756	175	58	128	361	21
1968	1,290	120	423	1,833	250	46	114	410	22
1969	1,263	160	436	1,859	255	46	128	429	23

190. We can see advantage in the simplification of the rank structure above the level of station officer, bearing in mind the smaller number of larger brigades which we have recommended and the consequent greater uniformity in command structure and functional responsibility which this will entail. We believe that the rank of assistant divisional officer will continue to be required to assist a divisional officer or to take charge of a group of stations, but we feel that with this greater uniformity there will be scope for a reduction in the number of grades of divisional officer. We accordingly RECOMMEND that the grades of divisional officer should be reduced from the existing three to two when brigade areas for the country are reorganised.

* These figures include a small number of candidates from industrial, etc., brigades.

† These numbers refer to passes of men in local authority brigades only: the percentage pass rate for the Institution's examination as a whole is therefore a little higher.

Fig. 13 STATION OFFICERS EXAMINATION, FIRE SERVICES CENTRAL EXAMINATIONS BOARDS AND INSTITUTION OF FIRE ENGINEERS

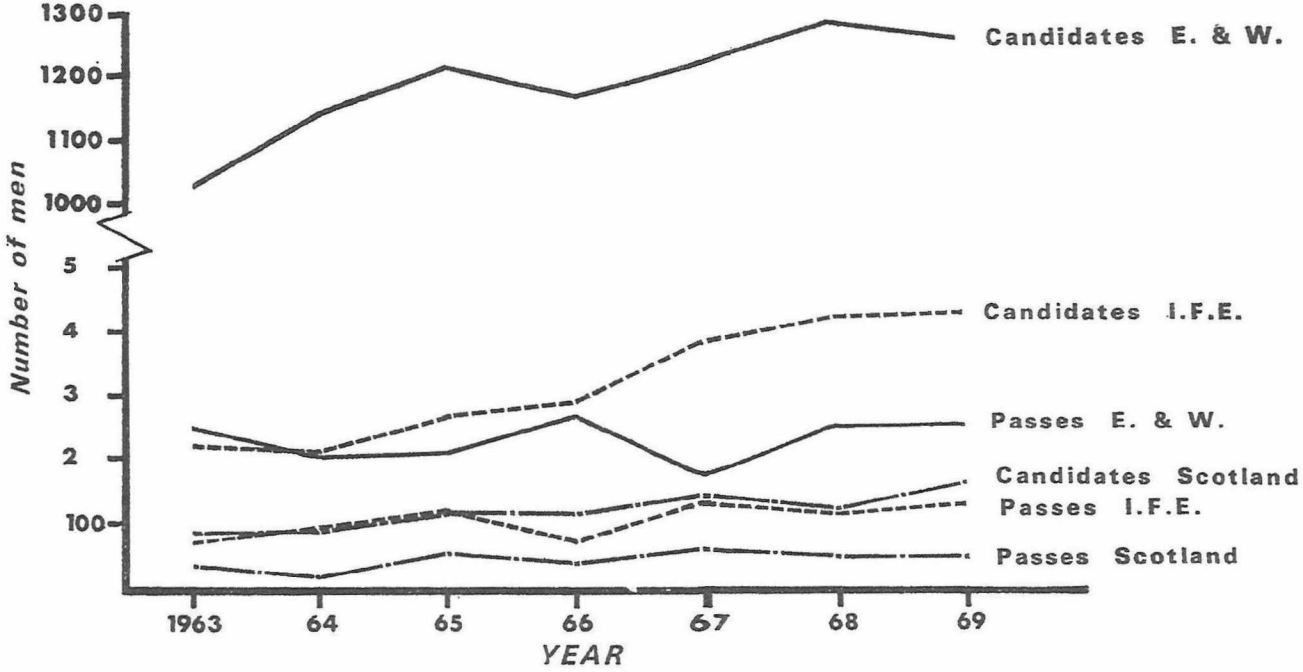
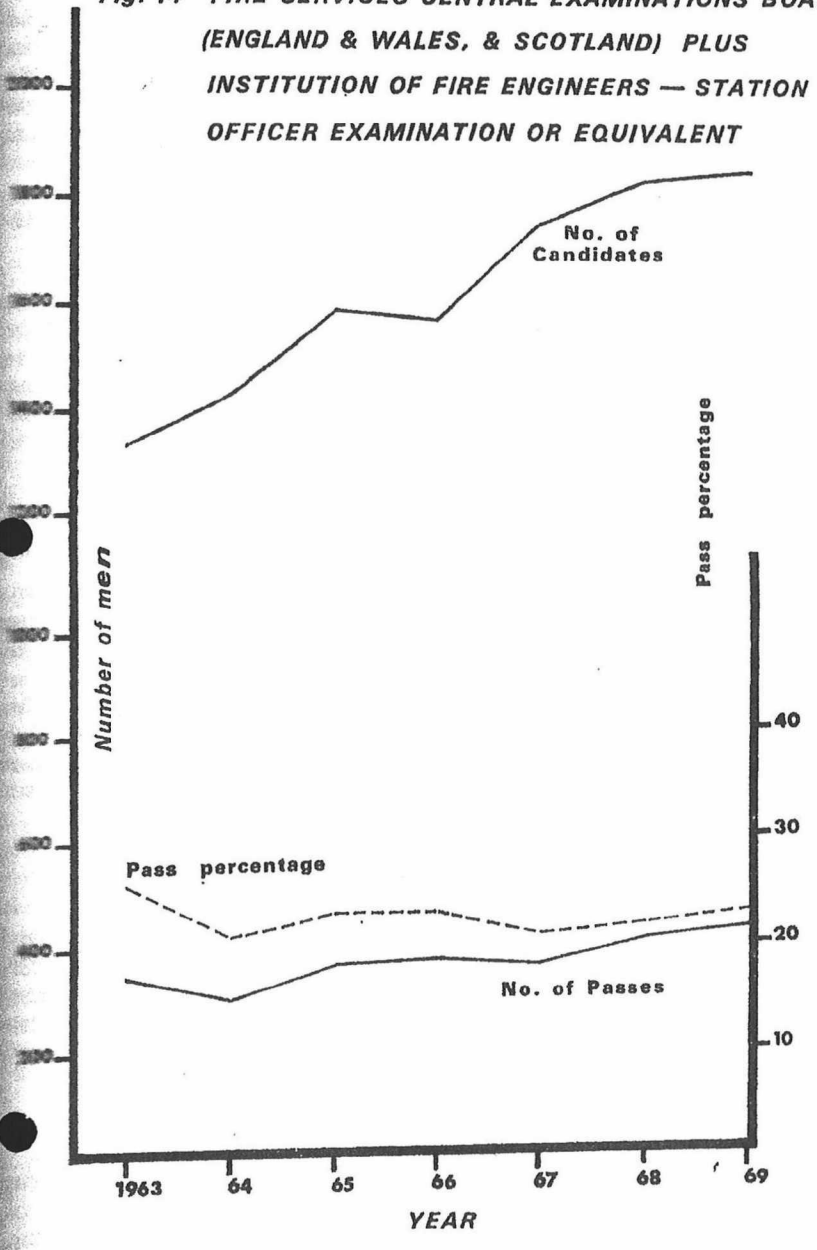


Fig. 14 FIRE SERVICES CENTRAL EXAMINATIONS BOARDS (ENGLAND & WALES, & SCOTLAND) PLUS INSTITUTION OF FIRE ENGINEERS — STATION OFFICER EXAMINATION OR EQUIVALENT



291. We see a clear need for assistant chief officers and assistant firemasters at a level immediately below the chief officer. We have referred in Chapter III to the need for brigades to be large enough to provide an adequate establishment of senior posts to cover specialist functions. We have in mind that they should be large enough to justify the senior specialist posts being filled by assistant chief officers. We would, therefore, expect the senior officer establishment of the service to contain a higher proportion of assistant chief fire officers than at present. We are not convinced that there is a need for a separate post of deputy chief officer or deputy firemaster; this is a "one upon one" arrangement which we do not regard as sound management practice. It would be sufficient for one of the assistant chief officers with defined functional responsibilities in the brigade to act also as deputy to the chief officer either permanently or as the need arises, and we RECOMMEND accordingly.

292. We have drawn attention in paragraphs 280-282 to the differences between the Appointments and Promotion Regulations for England and Wales and for Scotland. We have not been convinced of the need for maintaining these differences, nor have we formed any view on whether the detailed promotion regulations now applicable in Scotland are preferable to those for England and Wales, or vice versa. We RECOMMEND however that the same Regulations should apply to both countries.

EXAMINATION BOARDS

293. We have also considered whether there is a need for a separate statutory Examinations Board for England and Wales on the one hand and for Scotland on the other. The Scottish Examinations Board in its own written evidence to us recommended that a single Examinations Board should be established for the whole of Great Britain. Our own examination leads us to the same view and the majority of us RECOMMEND accordingly.* The new Examinations Board should ensure that the differences in fire prevention legislation and other special conditions in Scotland are taken into account in examining candidates from Scotland.

EXAMINATION EXEMPTIONS

294. We have considered whether there is a case for candidates with appropriate educational qualifications being allowed exemption from parts of promotion examinations, additional to that already permitted for the leading fireman written educational examination. We do not consider any further exemptions are necessary and RECOMMEND that the position should remain unchanged.

QUALIFYING PERIOD FOR EXAMINATION

295. We RECOMMEND that the minimum qualifying operational service period of two years which now applies for entry to the leading fireman technical examination in England, Wales and Scotland be reduced to one year. We believe this to be necessary with a single-tier entry system in order to provide early

*See note of dissent by Dr. Macfarlane.

opportunity for the more able men to show their mettle. In this way reduction of the qualifying period to one year might be helpful in the selection of men for the new accelerated promotion course. There would be no question of lowering the standard of the leading fireman technical examination if the qualifying period were reduced to one year. Indeed, we have already indicated that examination standards generally should be raised. Since entry to the sub-officer's written and practical examinations is dependent upon a man having passed all the leading fireman examinations, reduction in the qualifying period for the latter would automatically enable some able men to pass the sub-officer's examinations within two or three years of entering the service and this we consider to be highly desirable.

QUALIFYING PERIOD FOR APPOINTMENT

296. A pass in a promotion examination for a particular rank is not of itself a guarantee of appointment to that rank, but rather an essential pre-requisite for consideration for such appointment. In addition to the examination requirements already outlined, appointment to various ranks is subject to having completed the following periods of operational service:—

For appointment to the rank of leading fireman	—	2 years
For appointment to the rank of sub-officer	—	4 years
For appointment to the rank of station officer	—	5 years.

297. We have carefully considered the desirability of reducing these periods and have received a good deal of conflicting evidence on this subject. The main argument in favour of reduction is that the possibility of earlier and more rapid promotion in the service would make it more attractive to men who have recently joined and to potential new recruits. The chief argument against it is that the main requirement in the middle ranks of the service is extensive operational fire-fighting experience back by extensive training. A minimum of two years' experience for a leading fireman, four years for a sub-officer and five years for a station officer would not appear to be too long for acquiring this necessary experience, particularly when viewed against the length of the average man's career in the service of about 30 years. The only exception to this are men with high potential for the more senior jobs who will be catered for by the proposed new accelerated promotion scheme. We conclude on balance that a modest reduction in the qualifying periods would be justifiable and RECOMMEND that the minimum periods of operational service required for the ranks of leading fireman, sub-officer and station officer should respectively become one and a half years, three years and four years. This recommendation is made without prejudice to the special arrangements described in paragraphs 251 to 255 for the recommended new accelerated promotion scheme.

PROMOTION BEYOND STATION OFFICER

298. We have considered whether examinations should be introduced as a pre-requisite for appointment to ranks above station officer. In certain parts of the United States of America passing of examinations is a requirement for appointment to all senior posts. We feel that the qualities determining suitability for promotion to these higher ranks can only be evaluated by examination of a man's past performance and not by academic examinations, and we therefore do not favour the introduction of examinations for this purpose. We do, however,

commend the junior command and command courses at the Fire Service [illegible] College and hope that these will be continuously kept under review and develop[illegible] to meet changing circumstances and needs of the service. We consider that a [illegible] performance at these command courses should be one of the factors taken [illegible] account in promotion to senior posts and that to this end an appropriate sch[illegible] of assessment of performance should be worked out by the College and [illegible] Home Office Fire Department. The results of such assessments should be [illegible] available to the individual concerned and on request to the chief officer [illegible] brigade when considering him for an appointment to a senior post. We would [illegible] expect the performance of men on the command courses to be recorded in [illegible] central promotion register which we recommend in paragraph 306.

ENCOURAGEMENT TO QUALIFY FOR PROMOTION

299. We were informed that there have been cases of men being discour[illegible] from taking promotion examinations until they have completed the qualif[illegible] period of service for actual promotion. We ourselves have had no opportu[illegible] to examine the extent of this practice or the reasons for it, but we think it is q[illegible] wrong that men should be discouraged in this way. We consider it desirable [illegible] as many men as possible in the lower ranks should be encouraged to improve [illegible] technical qualifications by studying for the statutory promotion examinat[illegible] and that a specific financial incentive should be provided for successful candid[illegible] We have examined a number of schemes of this kind which are in operation [illegible] public service and in private industry. We RECOMMEND that, whether [illegible] motion follows directly or not, when a member of the fire service has pass[illegible] statutory promotion examination in its entirety, whether after reference or [illegible] should receive a payment of £30. By the time he has passed the station offi[illegible] examination he will have received a total of £90. These amounts should [illegible] reviewed from time to time.

INSTITUTION OF FIRE ENGINEERS

300. Our account of the present statutory provision for promotion exam[illegible] tions to the rank of station officer in paragraph 283 mentioned the alter[illegible] statutory provision for a written technical examination set by the Fire Ser[illegible] Central Examinations Board or the passing of the graduateship examinat[illegible] the Institution of Fire Engineers. Statistics indicate that by far the greater nu[illegible] of candidates wishing to qualify at this level take the examination set by [illegible] Board rather than the equivalent and exempting examination set by the In[illegible] tion. We are satisfied that existing arrangements made between the Central [illegible] Services Examinations Boards and the Institution Examinations Committe[illegible] reasonable and adequate to ensure that the standards of the two examinatio[illegible] broadly in step. We see no reason for suggesting that the present system of h[illegible] two alternative examinations for the rank of station officer should be cha[illegible]

301. It is not for us to make detailed investigations about the general effe[illegible] ness of the Institution or to make recommendations about the manner in wh[illegible] future activities should be directed. We believe, however, that the existence [illegible] professional body of this kind can be very helpful to the service. For exampl[illegible] feel that the Institution could make a valuable contribution by seeking to rai[illegible]

standards of its associate membership examination. This is the only examination available to the service which is of a higher standard than the station officer's examination, and in the light of our remarks in paragraphs 273-274 about university first degree and diploma courses in fire engineering we feel that it is very desirable that the associate membership examination should become a genuine professional qualification. We have good reason for thinking that the more able men in the service would themselves welcome such a development. Nevertheless, we adhere to the view expressed in paragraph 298 that passing this or any other examination should not be a pre-requisite for appointment to ranks above station officer.

PROMOTION REQUIREMENTS AND MANPOWER PLANNING

302. In order to ensure the continuing efficiency of the service, it seems to us necessary that future requirements for promotion to the ranks of station officer and above, and the availability of men with the qualifications and experience for such promotions, should be kept under continuous review. We have made an attempt to examine the position for the immediate future but have not been able to get very far with the available data.

303. During 1968 the number of senior officers (which we define for this purpose as divisional officers and above) was about 660 in England and Wales and 70 in Scotland. The larger authorities which we have recommended in Chapter III, in spite of there being fewer of them, are likely to need a somewhat larger number of senior officer posts. It is part of our thesis for the reorganisation of the service that in all brigades specialist functions should be the responsibility of senior officers, which has not been possible in the smaller of the existing brigades. As a rough estimate we consider that, if our recommendations for the reorganisation of brigades are adopted, the establishment of senior officers required in Great Britain in the near future will be about 800. We do not expect a corresponding increase in the number of assistant divisional officers and station officers required.

304. We estimate that recruitment of about 2,000 firemen annually will be needed to maintain a total establishment of officers and men of about 28,000 in Great Britain as a whole. This is equivalent to an annual recruitment requirement of 7% of establishment and agrees with recent estimates accepted by the Central Fire Brigades Advisory Councils. Bearing in mind that premature wastage occurs largely in the lower and middle ranks of the service, it would be expected that, provided that there was a balanced age distribution amongst senior officers, the national average replacement rate in their case would be lower, at say about 5%. However, the position is that the average age of senior officers other than chief officers in 1968 was 48 and that of chief officers 54, and it would be more reasonable to assume that the average replacement rate in the next decade will have to be something of the order of 8 or 9%. It therefore appears to us that there will be a national need for the appointment of senior officers, including chief officers, which requires promotion from ranks below divisional officer of about 70-80 annually during the next decade. Sufficient data are not available to enable us to make even an approximate estimate of the promotions from ranks below assistant divisional officer or station officer. Similarly, we have no adequate information about the number of men in the various ranks from sub-officer upwards with suitable potential for filling these vacancies.

305. The fact that we can go no nearer than this to obtaining a picture of the promotion requirements and how they are to be met in the immediate future demonstrates the lack, in the service as it is organised at present, of adequate facilities for a continuous review of a variety of fire service problems from a national standpoint on which forward planning and guidance to fire authorities can be based. We recommend in paragraph 107 that such work should be carried out by a strengthened Fire Department of the Home Office. We RECOMMEND that this Department should include in its activities continuous studies of the factors we have discussed in the last few paragraphs, which we consider to be essential to enable decisions to be made on recruitment and promotion policy and to ensure the continued operational efficiency of the fire service.

306. In addition to these studies we RECOMMEND that the enlarged Home Office Fire Department should establish and maintain a central register of men who by virtue of experience, personality, training and education are deemed by their chief officer to be suitable for promotion. We would expect fire authorities to make use of this register when senior officer vacancies occurred in their brigades. It is not intended that consideration of candidates for promotion should in any way be limited to those on the central register. All posts should continue to be advertised nationally and any man with the appropriate qualifications who applies for a post should be considered on his merits.

FIRE BRIGADE PROMOTION BOARDS

307. We understand that it is the practice in some fire authorities for elected representatives to be members of promotion boards, which interview and select candidates for appointment to supervisory ranks in the brigade. We accept that this practice should be followed for chief officer and assistant chief officer appointments. In our view, however, since the chief officer is responsible to the fire authority for the management and operational efficiency of the brigade, he and through him his senior officers should be competent to judge and select suitable candidates for appointment to operational posts in the brigade. We RECOMMEND that all appointments below the rank of assistant chief officer should be made by the chief officer in accordance with arrangements approved by the fire authority.

CHAPTER X

PART-TIME FIREMEN

THE PRESENT POSITION

308. The availability of part-time firemen for fire-fighting purposes and for special services, mainly in areas of low or medium fire risk, is a vital element in providing fire cover for the country as a whole. We have been greatly impressed with the enthusiasm and capability of many of the units with which we have come into contact during our inquiry and with the need for the part-time employment of firemen to be maintained and, indeed, if possible to be extended. In those parts of the country in which the number of fire calls per year is low and is likely to remain so, employment of whole-time firemen in place of part-time firemen would result in an unnecessary increase in costs and from a national point of view inefficient deployment of manpower. We make a number of recommendations in this chapter with these facts in mind.

309. The term part-time firemen covers two distinct groups of persons, namely retained firemen and volunteer firemen. A retained fireman undertakes to make himself available for an average of two hours training and maintenance duties a week, usually at a local retained fire station, and to be available for call-out if required either during the whole or some recognised portion of the week. Retained men are paid an annual retaining fee, and turn-out or attendance fees when they respond to calls. These fees are recommended to fire authorities by the National Joint Council for Local Authorities' Fire Brigades.

310. During 1968 the establishment for part-time retained firemen in England and Wales was 18,377, the number actually employed being 17,501. After taking into account that some of these retained men were available for only part of the required 24 hour cover, the effective number of whole units actually employed was 13,993. The number of whole units actually employed in Scotland was 2,115 against an establishment of 2,503. Tables 18 and 19 indicate the trend of establishment and employment of part-time retained men in England and Wales and in Scotland during the last 15 years.

311. Volunteer units comprising part-time volunteer firemen are maintained in relatively isolated parts of the country in which the maintenance of retained men and retained stations could not be justified. These units are usually small groups of men based on a village or local community with some simple fire-fighting equipment at their disposal. Part-time volunteers receive no payment for their services, either for training or for call-out. They are entitled to compensation for loss of earnings, but this is limited to the actual loss or the pay for the period of a whole-time fireman of equivalent rank on appointment, whichever is the less.

312. During 1968, the number of volunteer firemen in England and Wales was 292, all of them serving in county areas. In the same year 724 volunteer firemen were employed in Scotland, 89% of them in the Western and Northern Brigades. Both these brigades comprise very large sparsely-populated areas and islands with

scattered communities. Tables 18 and 19 indicate the trend of establishment and employment for volunteer firemen in England and Wales and in Scotland during the last 15 years.

TABLE 18

PART-TIME FIREMEN
ENGLAND AND WALES

Year at 31st December	*Retained Men*					*No. of volunteers*
	Establishment (whole units)	*Whole-time men*	*Others*	*No. employed*	*Whole units employed*	
1954	19,255	not known	not known	14,559	not known	803
1955	19,182	,,	,,	14,334	,,	760
1956	19,045	,,	,,	14,310	,,	732
1957	18,744	,,	,,	14,211	,,	704
1958	18,578	726	13,428	14,154	,,	632
1959	18,423	795	13,616	14,411	,,	563
1960	18,223	858	13,421	14,279	,,	519
1961	18,238	916	13,318	14,234	,,	465
1962	18,233	1,310	13,381	14,691	,,	399
1963	18,309	1,683	14,955	16,638	14,737	387
1964	18,412	1,816	15,056	16,872	14,950	402
1965	18,221	1,995	14,852	16,847	14,798	366
1966	18,261	2,214	14,894	17,108	15,277	350
1967	18,260	2,520	14,780	17,300	14,100	347
1968	18,377	2,782	14,719	17,501	13,993	292

TABLE 19

PART-TIME FIREMEN
SCOTLAND

Year at 31st December	*Retained*		*Volunteer*	
	Establishment	*Strength (whole units)*	*Establishment*	*Strength (whole units)*
1954	2,455	2,022	594	464
1955	2,458	2,035	601	456
1956	2,458	2,037	608	458
1957	2,481	2,102	626	468
1958	2,483	2,111	627	484
1959	2,494	2,104	634	477
1960	2,479	2,097	637	482
1961	2,461	2,097	592	488
1962	2,433	2,082	542	479
1963	2,444	2,089	550	497
1964	2,459	2,088	552	490
1965	2,459	2,070	555	519
1966	2,475	2,105	577	580
1967	2,485	2,130	584	617
1968	2,503	2,115	not known	724

Part-time firemen

313. One of the features of the retained service during recent years has been the substantial increase in the number of whole-time men voluntarily undertaking retained duties. In 1961, the National Joint Council for Local Authorities' Fire Brigades and the Fire Brigades Union agreed that, in addition to whole-time men employed at stations manned for only part of the day, other whole-time men could undertake retained duties at stations manned by retained men. It is clear from the figures in table 18 that the number of men who have taken advantage of this arrangement has increased over the years. We believe the arrangement to be in the interests of effective utilisation of skilled and trained manpower, since very clearly the standards of training and experience in fire-fighting of whole-time men offering themselves for retained service will be superior to that likely to be possessed by the average part-time retained man, whose full-time occupation lies in a different field.

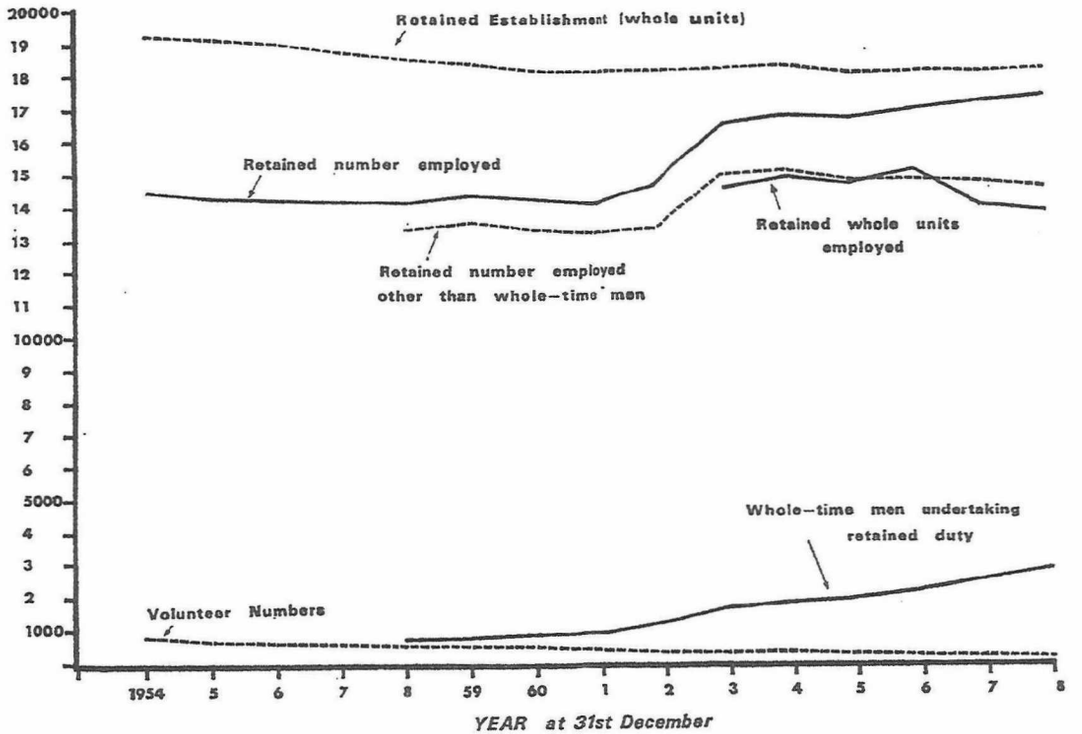
RECRUITMENT OF RETAINED MEN

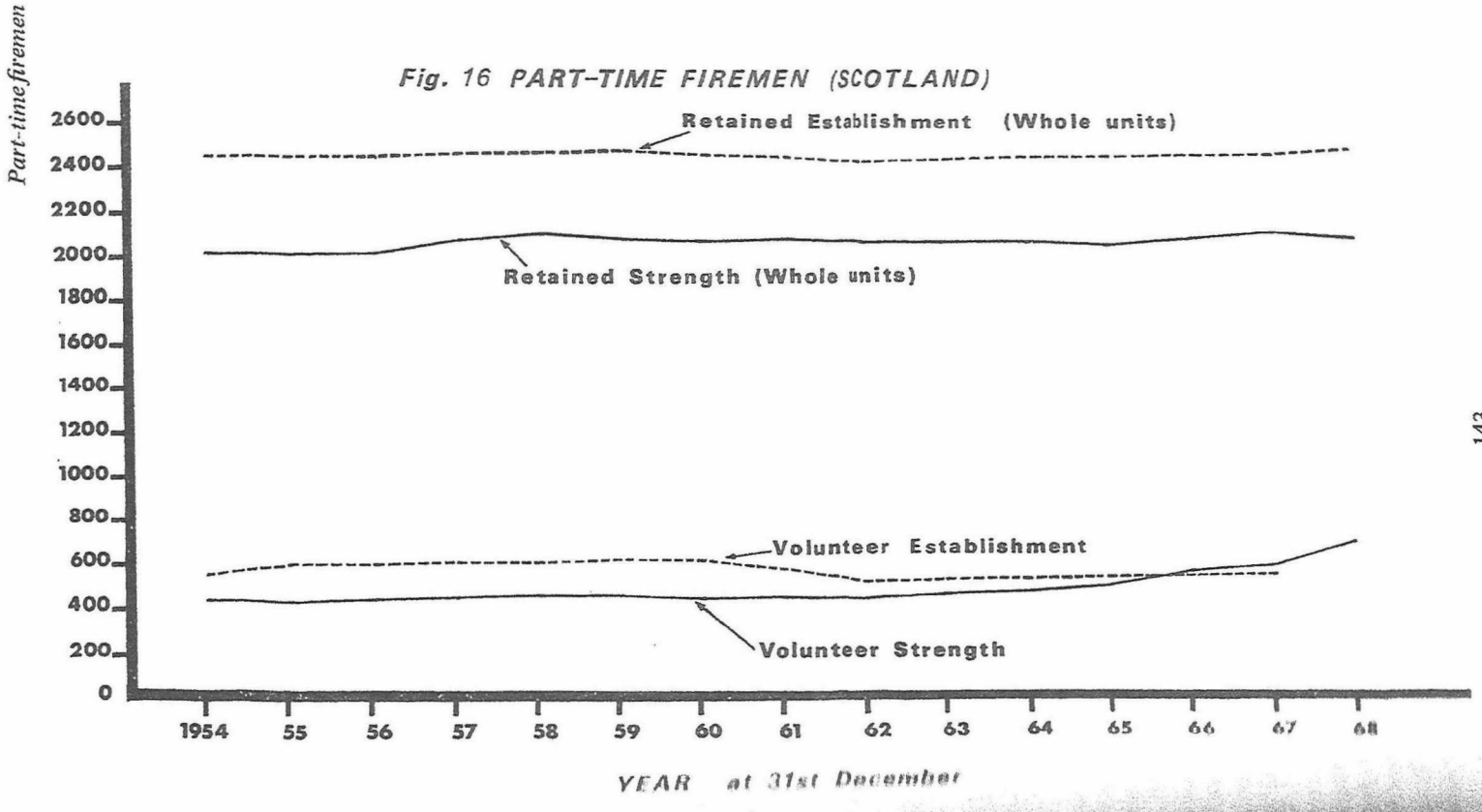
314. There has been a slight increase in recent years in the number of retained men employed in England and Wales, largely as a result of whole-time men undertaking retained duties. The number of whole units of men available has, however, decreased because of the reduced availability of the men employed. Expressed in whole units there is now a gap of 24% in England and Wales between establishment and strength, although the retained establishment remained approximately constant and the total number of men employed rose by 21%. In Scotland during the same period the position is different, in that the relationship between establishment and the number of whole units of men employed remained constant, with a deficiency of about 15% in terms of whole units. These figures are illustrated in figures 15 and 16.

315. We RECOMMEND that all possible steps be taken by publicity, persuasion and some practical incentives to improve the recruiting position, reach full establishment and extend the use of retained men to other appropriate areas. We deal in paragraph 190 with issues of publicity and public relations for the fire service as a whole and would urge that in this context the importance of the retained service should be fully stressed. We believe there is scope for a continuing publicity campaign in appropriate areas directed at both public and private employers and at employees, which would emphasise the social service aspect of the retained service in relation to both the area which it serves and the community as a whole. There are indications that a significant proportion of the younger generation is prepared to undertake voluntary service for the common good, and the retained service appears to offer considerable scope for this.

316. We would urge the National Joint Council for Local Authorities' Fire Brigades at an early date to undertake a critical review of the retaining and other fees now paid for part-time service. Although these fees have been increased from time to time, they have not kept pace with the increases in pay for whole-time men and we doubt whether they are adequate at the present time. We consider that it would be a sound investment to enhance the fees for retained men relative to the pay of whole-time men in order to increase the attractiveness of part-time service.

Fig. 15 PART TIME FIREMEN (ENGLAND & WALES)





317. We have noted on our visits to some of the newer retained stations that some of these have incorporated a modest provision of what might be termed social club amenities. We have been impressed by the good effect of this on the morale of the retained firemen concerned, and RECOMMEND that such amenities should be provided wherever and whenever possible. We believe that the cost of such provision would be insignificant in relation to the financial benefits associated with the use of retained rather than whole-time firemen.

318. We are particularly concerned that effective action on these lines should be taken to increase recruitment to, and to prevent increase of wastage from, the retained service, in the light of our recommendations for fewer and larger fire brigades. In England and Wales the 54 county brigades employ 13,676 part-time retained units while 27 of the 77 county borough brigades employ 317 such units. In Scotland, the ten area brigades employ 2,115 retained units. When the brigade areas are reorganised in Great Britain, it is probable under existing arrangements for providing fire cover that nearly all the new brigades will include an establishment for retained men. We RECOMMEND that the new fire authorities should give early consideration to the practicability of extending the use of retained men to provide part of the fire cover on the fringes of urban areas which are at present entirely covered by whole-time men.

319. If the retained strength is to be maintained and extended as we suggest, it will be important to ensure that harmonious relationships exist between retained men and whole-time men, some of whom will not have had prior experience of working with retained stations. The new fire authorities and the chief officers of the new brigades should do all they can to ensure harmonious relationships between the whole-time and retained men under their command.

TRAINING OF RETAINED MEN

320. We recognise that retained men need effective and regular training, and bearing in mind the limited time they have available for this purpose we are impressed with the standard of efficiency and performance which they have attained. Their training needs are substantially confined to training in fire-fighting and special services work and do not include other functions such as fire prevention, which are an increasingly important part of the work of whole-time men. We have no doubt that the enthusiasm and frequent attendance at fires of many retained men compensate to a significant extent for the limited time which they are able to spend in training. Retained men undertake to spend at least two hours weekly on organised training and maintenance duties, and we do not consider it practicable to recommend any extension of this obligation. On the other hand, we consider that this time should be spent entirely on training and the maintenance of operational equipment, and that retained men should not be expected to undertake station cleaning and other similar duties, and we RECOMMEND accordingly.

321. We welcome the recent provision of standard syllabuses of training for retained men, and urge that common standards of training be adopted by all brigades and that the subject be kept under continuous review by the Joint Training Committee of the Central Fire Brigades Advisory Councils. We also welcome the provision of short residential training courses for retained officers

men at the Fire Service Technical College. We believe such courses serve a useful purpose, but recognise that attendance must remain voluntary.

322. The promotion regulations which we have discussed in Chapter IX do not apply to retained men. At present they are promoted to the rank of leading fireman or sub-officer, and in a few areas to the rank of station officer, by the chief officer of the brigade. While it would further enhance the efficiency of the retained service if some of its members were to take and pass the statutory promotion examinations, we do not consider it possible that any significant increase of the number who do this is likely or could reasonably be expected. We would, however, wish every possible incentive to exist for even a small number of men who might be keen to take promotion examinations, and we therefore RECOMMEND that the single-payments for the passing of each promotion examination for whole-time men, which we have recommended in paragraph 299, be applied equally to retained men.

COMPENSATION FOR EMPLOYERS

323. We have considered the possibility of a scheme of financial compensation for employers who release men for part-time fire-fighting duties during working hours. We appreciate the inconvenience and expense to employers, particularly those engaged in continuous production with expensive plant, of releasing men in this way but have encountered little evidence that this is a seriously limiting factor in the recruitment of retained men. Many employers release men for part-time fire-fighting duties in the same spirit of public service as the men who undertake this work. In these circumstances, and in view of the practical difficulties of administering any compensation scheme, we feel that offers of compensation would have little value and might even have some adverse effect.

PROBLEMS OF AREAS WITH LOW DENSITY POPULATION

324. We have had little evidence concerning the small number of volunteers in England and Wales. We have, however, had strong representations from Scotland, and especially so from the firemasters of the Northern and Western Brigades, where the topography has made it impossible to provide either whole-time or retained cover for many scattered communities on the mainland or the many islands.

325. The evidence suggests that these problems are not capable of solution, for example, by substituting retained cover for volunteer effort. We conclude that in such areas reliance must continue to be placed on local volunteers being able to give first-aid assistance with the help of simple extinguishing equipment and with such training as the whole-time fire brigade can provide and the volunteers are willing to undertake.

326. Much as we sympathise with the problems of these areas, we cannot accept a proposition that has been put to us that the central Government should provide additional financial assistance to the local fire authorities concerned for improving fire-fighting facilities. Because of their special problems these areas already receive a substantially higher than average percentage of government assistance on their rate fund expenditure. For this reason, we could not justify recommending that provision for fire-fighting in these areas should be the subject of a specific exchequer subvention.

327. We are aware of the growing importance of the tourist industry in some of these outlying areas and the consequent concern about hotel fires. We have referred in Chapter V to the fact that the occupiers of isolated premises cannot expect the public fire service to provide fire cover above the average for the area and this principle applies to these hotels. We believe, therefore, that the owners and managements of such establishments have a duty to make maximum fire prevention provision and to ensure that their own staffs receive at least elementary training in first-aid fire-fighting techniques. We have no doubt that the fire brigade for the area would be willing to assist in all these matters.

328. In order to stimulate the recruitment of volunteer firemen in these outlying areas and, equally important, to secure attendance at such training sessions as can be arranged by whole-time brigade officers, we RECOMMEND that the volunteer firemen should be paid fees for call-out and training, additional to loss of earnings allowances, at an hourly rate somewhere midway between the fee for turn-out and that for attendance paid to retained firemen. We consider that the fire authorities concerned should take these matters up with the National Joint Council for Local Authorities' Fire Brigades.

CHAPTER XI

MACHINERY FOR DETERMINING PAY AND CONDITIONS OF SERVICE

EXISTING ARRANGEMENTS

329. Legal responsibility for determining the pay and conditions of service of all members of fire brigades, from fireman to chief officer, rests with individual fire authorities. Almost without exception, these authorities deal with the fire service in this matter as they do with administrative, professional and most other staff, by accepting the recommendations of national joint councils on the Whitley model. In these joint councils, which became widely established for dealing with local government staffs during the last war, pay and conditions of service are negotiated between representatives of the appropriate local authority associations and staff organisations. Their position was strengthened when post-war legislation made it obligatory for individual authorities to observe terms and conditions not less favourable than those established by the negotiating bodies.

330. When control of the fire service was returned to local authorities in 1947, two National Joint Councils were set up. One, the National Joint Council for Chief Officers of Local Authorities' Fire Brigades, deals only with chief officers. The Employers' Side comprises representatives of the County Councils Association, the Association of Municipal Corporations, the Convention of Royal Burghs, the Association of County Councils in Scotland, the Scottish Counties of Cities Association, and the Greater London Council. The Staff Side consists solely of representatives of the Chief Fire Officers' Association. The other, the National Joint Council for Local Authorities' Fire Brigades, deals with all members of brigades other than chief officers. The Employers' Side is representative of the same bodies as are represented on the Employers' Side of the Joint Council for Chief Officers, while on the Staff Side are representatives of the Fire Brigades Union and the National Association of Fire Officers. The National Joint Council appoints an Officers' Committee with plenary powers for dealing with officers' pay and conditions of service, which reports to the full Council only to keep them informed of its decisions. All other questions are dealt with by the full Joint Council. The Fire Brigades Union has a majority on the Staff Side of the full Joint Council, but on the Officers' Committee the National Association of Fire Officers is in the majority.

LOCAL VERSUS NATIONAL NEGOTIATION

331. The Donovan Commission[1] stressed the advantages of plant bargaining in industry, but at the same time pointed out that there is much greater similarity between the conditions of employment within a given grade of staff throughout

1. Royal Commission on Trade Unions and Employers' Associations 1965-1968 (Cmnd. 3623).

the Civil Service and the local government service, wherever members of the staff may be employed, than between employees of a similar grade in the widely differing conditions of individual industrial plants. In the case of national settlements for central and local government staffs, there is not a great disparity between nationally negotiated rates of pay and actual earnings, as there is in industry. A change to local negotiation in the fire service would be likely to sacrifice the uniformity of reward appropriate in a service where the tasks to be performed and the conditions of work are broadly similar throughout the country. We are strongly in favour, therefore, of retaining the present system of national negotiations for the fire service.

332. We consider that the National Joint Councils for the fire service function reasonably well and RECOMMEND their continuance with such modifications to their constitution as may be necessitated by the reorganisation of local government. The possession of a common secretariat with all the other National Joint Councils catering for local authorities' staff ensures that agreements reached are kept in a close relationship with wage and salary movements over the whole range of local government staff and in other comparable fields of employment. This from the local authorities' point of view is clearly desirable. We recognise, however, the possible danger that the very proper concern for keeping a balance between any one service and the other services administered by local government could result in insufficient regard being paid to the special qualities required in men employed in that service. Firemen need to have a combination of qualities quite different from that required in most other employments. They have to accept the discipline and physical risks which the service inevitably involves; they have to be capable, given intensive training, of using the sophisticated materials and methods of modern fire-fighting; and they must have or be able to acquire the basic education needed for them to be effective in contacts with a wide variety of people, particularly in connection with fire prevention. Moreover, with the single tier entry system which we recommend should continue, the service has to be able to attract a proportion of its recruits from men of more than average intelligence and educational attainment in order to provide the officers of the future. It is not our function to prescribe rates and scales of pay appropriate for firemen, but we consider that the earnings of fully trained men with all-round operational experience should be comparable with the national average earnings of skilled craftsmen. We refer to this in more detail in paragraphs 342 to 344 in Chapter XII. In making this comparison a realistic appraisal will be reached only if it is drawn:—

(*a*) between average weekly earnings and the value of such emoluments as rent and fuel allowances in the competing classes of employment, and not merely between basic weekly rates; and

(*b*) with due regard to the fact that an operative in industry is paid for his actual working time, while a proportion of the period of a fireman's weekly hours of duty is necessarily spent on stand-by.

REPRESENTATION OF OFFICER RANKS

333. The view has been expressed to us that as the fire service is a disciplined service it is inappropriate that the Fire Brigades Union representing the men should have any concern with, or even be represented on, the Committee which deals with the pay and conditions of service of officers. We cannot agree with this

view. As a result of the single tier system of entry into the fire service, most officers prior to promotion are members of the Fire Brigades Union and many of them retain their membership when they become officers. We therefore consider that the Fire Brigades Union has a legitimate right to take part in the negotiations affecting this section of its membership.

SPECIAL RATES OF PAY IN SELECTED AREAS

334. There are a few fire authorities which provide rates of pay higher than those agreed nationally. We realise that difficulties are created when men in neighbouring areas receive different rates of pay, but it would seem inevitable that there will continue to be places where owing to local conditions a case could be made for special rates. We think it important, however, that the granting of special rates of pay for particular areas should be a matter requiring the agreement of the National Joint Council and should not be left to the discretion of local authorities. With most of the special rates currently being paid the Employers' Side of the National Joint Council has given its approval, but we feel that in future consideration of these matters should be by the full National Joint Council, including the Employees' Side. We think that every proposal for special rates should be subject to examination centrally to ascertain, for example, whether the alleged difficulty in maintaining adequate recruitment is a matter of remuneration, or could be attributed to some other local circumstance within the power of the local authority to remedy without recourse to a special weighting of nationally agreed rates. We RECOMMEND that all proposals for rates of pay above the national scale or for special allowances should be considered by the full National Joint Council and we would hope that its findings would be accepted by all concerned.

CHAPTER XII

OTHER METHODS OF INCREASING THE EFFICIENCY AND ATTRACTIVENESS OF THE FIRE SERVICE

INTRODUCTION

335. In any organisation efficiency depends to a large extent on making the most effective use of manpower. Until recently this has been virtually impossible in the fire service, in which a large number of men spread over Great Britain in relatively small groups has had to be instantly available to deal with fires and other emergencies but has had little useful work during the frequent and often long periods between calls. The time has been filled with drills, station cleaning and a certain amount of "bull" in the shape of polishing of brass on equipment. Due to the widening activities of the fire service, particularly in connection with fire prevention, and because of the major developments in radio communication, the position is now quite different and it should be possible to use firemen on station duty for a number of non-fire-fighting tasks without affecting their availability for fire calls. There is, moreover, another aspect of manpower utilisation which affects the service. Firemen must possess a combination of qualities substantially different from those required in other employments. They must accept the discipline and physical risks inherent in the service and be able to adjust themselves to highly varying conditions, as well as being technically efficient in their jobs. Social changes and competition will inevitably make it more difficult for the service to acquire this type of man and it will become increasingly important to use firemen as exclusively as possible for fire-fighting and for activities which essentially demand fire-fighting experience. We have referred to this matter in connection with our recommendation in Chapter V that the service should keep to a minimum its involvement in matters which are not essentially connected with fire.

USE OF OPERATIONAL FIREMEN ON STATION DUTY FOR FIRE PREVENTION AND OTHER NON FIRE-FIGHTING DUTIES

336. The total number of fire prevention inspections made by brigades in England and Wales increased from 216,574 in 1960 to 557,896 in 1968 and the increase in Scotland was of a similar order. A high proportion of this work has arisen from the administration of the fire prevention provisions of the Factories[1] and Offices, Shops and Railway Premises Acts and, although most premises with a high fire risk have been inspected, many fire authorities still face a large volume of work arising from these Acts. This backlog, together with the need for more frequent follow-up inspections, the increasing demand for goodwill fire prevention advice and additional work arising from our fire prevention recommendations in Chapter XIV, will inevitably necessitate an increase in the establishments of fire brigades' fire prevention departments.

337. We consider that this increase in establishment could be minimised by employing operational staff on station duty for routine fire prevention duties, for

1. 1961 C.34.

on follow-up inspections in commercial and industrial buildings to ensure that the requirements of means of escape and other fire prevention matters are being complied with. This is already the practice in some brigades. Firemen go out in teams with their appliances and, since they are in radio contact with their station, they can proceed direct to any fire call. We welcome this development and would like to see the practice greatly extended. While we appreciate that there are many fire prevention duties which could not be carried out by operational firemen, we feel that the generality of routine fire prevention inspections would be well within their capabilities, provided that they were given the necessary training in elementary fire prevention techniques and that they worked to a pattern laid down by experienced fire prevention officers.

339. An additional advantage of this scheme would be that operational firemen would gain first hand experience of the working conditions and layout of premises in their neighbourhood in which they might later be called upon to fight a fire. Involvement in fire prevention duties would also increase the variety and interests of the fireman's job, and the evidence of the recent Government social survey "The Fire Service and its Personnel"[1] indicates that it would be greatly appreciated by firemen themselves.

340. We therefore RECOMMEND that all firemen should be trained in elementary fire prevention duties and that the use of operational firemen for the more routine fire prevention inspections should gradually be introduced into all brigades.

340. In Chapter XVII we emphasise the need to make the general public more conscious of the dangers of fire and to advise them on elementary fire prevention procedures. In some areas arrangements have been made for householders voluntarily to invite fire brigade representatives to visit their homes and we should like to see this extended. Operational firemen on station duty could be used for this purpose, provided that it could be carried out on a street basis so as to employ a full fire appliance team.

STATION CLEANING DUTIES

341. We feel that by providing better study facilities at fire stations, particularly in the form of programmed learning, and by employing operational firemen on station duty for the non fire-fighting duties which we have described above, their time could be utilised fully and effectively. Cleaning and maintenance of appliances should continue to be part of their duties, but we consider that operational firemen should not regularly be employed on cleaning floors, windows, washrooms, etc. We RECOMMEND that fire authorities should employ civilian cleaners for station cleaning duties. Apart from allowing maximum use to be made of firemen for duties which require their special knowledge and experience, we feel that this measure would considerably improve the image of the service, particularly in the eyes of potential recruits.

RECOGNITION OF THE FULLY-QUALIFIED FIREMAN OTHER THAN BY PROMOTION

342. The widening of the activities of operational firemen of the basic rank as recommended above implies a high degree of flexibility in the use of operational

1. Published by H.M.S.O. 1969.

firemen. This requires in turn that the majority of them receive training and obtain experience in all or most of the duties involved in fire-fighting, i.e., the use of turntable ladders, use of breathing apparatus, appliance driving, etc. We believe that such flexibility would also help to improve the efficiency of brigades and, at the same time, add variety to the work of individual firemen, which they would very much appreciate.

343. This raises the question of special skills of firemen in relation to their pay, which has recently been under discussion in some parts of the country. In our opinion very few if any of the corporate skills needed in fire-fighting should be looked upon as special. A fully-qualified all-round operational fireman should possess them all. We are therefore not in favour of any system which would prescribe special payments for specific skills. Instead, we should like to see adequate recognition being made of the value of the all-round fully-qualified operational fireman as defined above, irrespective of whether he seeks or is likely to gain promotion from the basic rank.

344. We therefore RECOMMEND the introduction into the fire service of a new grade of senior fireman with earnings comparable with those of skilled craftsmen in industry, as is the case in other countries which we have visited. Senior firemen would not be involved in supervisory duties and there would, therefore, be no change in the rank structure. The new grade should be open to firemen with a minimum of three years' operational experience who are considered to be qualified in the full range of duties and skills required in fire-fighting operations. We envisage that their pay would be above the maximum of the ordinary fireman's scale but below that for leading fireman. We recognise that to achieve this some adjustment of differentials will be needed. We regard the introduction of this grade of senior fireman as being of particular value in providing recognition and encouragement for the large numbers of extremely competent firemen who do not seek promotion or who are unlikely to gain it. All firemen, and not just those who have been given senior fireman status, should certainly continue to be eligible for promotion to leading fireman and be able to take the various promotion examinations as at present.

MOBILISING ARRANGEMENTS

345. We now come to the question of minimising the use of firemen for jobs which do not require their special training and experience. In the past, most fire stations had watch rooms for receiving fire and other emergency calls and for mobilising firemen and appliances, and these watchrooms were generally manned by operational firemen. In recent years many fire authorities have taken advantage of improved communications systems and have concentrated mobilisation control at one or a very few central points. This has reduced staff requirements, and has made possible the greater use of firewomen and in some cases civilian control room staff. We are much in favour of this centralisation and, although we appreciate that there are areas in which it is impossible due to absence of suitable communication facilities, we feel it could be greatly extended. We feel that many fire authorities may not yet have provided central mobilising systems because of the high capital cost which centralisation inevitably entails. We have come across one or two cases of small stations which have retained their watchroom because otherwise the security of the station would be at risk unless provision were made for

self-closing doors. Because of the rising cost of employing trained personnel and of the difficulties we see ahead in recruiting firemen, we consider this to be a very short sighted policy. We RECOMMEND therefore that with the reorganisation of fire brigade areas, fire authorities should review their mobilisation arrangements with a view to centralisation wherever this is practicable.

CONTROL ROOM STAFF

346. Control room operators have to be proficient in such subjects as telephony, radio telephony, switchboard operation, typing and in some cases teleprinter operation. They also have to be meticulous and reliable in carrying out mobilisation and other procedures. About 950 firewomen and 700 firemen are employed in fire brigade control rooms. Some are staffed entirely by women, others by a mixed staff of men and women and the remainder by men. The women and about one-third of the men are recruited specially for the work; the remainder of the men are operational firemen who have been either temporarily or permanently assigned to the work or have been disabled and are unfit for operational duties. A few brigades employ civilians for the work, but all other control room staff are uniformed members of brigades and subject to the Fire Services Disciplinary Code.

347. The Fire Services (Appointments and Promotion) Regulations do not apply to staff who are recruited specially for control room work, and there are no national standards for appointments and promotion, which are matters for individual fire authorities. The recruits are generally required to pass an elementary educational test set by the fire authority and an interview, and to undergo a medical examination for superannuation purposes. Promotion is by selection, although a few of the larger brigades have established their own promotion examinations for the purpose. Promotion prospects are necessarily limited because the staff are mainly employed in small units (many control rooms are manned by 10 or fewer operators). The highest rank for men is station officer and for women group officer, which relates approximately to assistant divisional officer. Officer posts are generally advertised, but as the salary increase offered is insufficient to make movement from one area to another worthwhile financially, advertisements do not generally attract many applicants from other brigades.

348. Conditions of service are a matter for the National Joint Council for Local Authorities' Fire Brigades and differ from those of operational firemen. Rates of pay are lower, and firewomen are paid less than firemen employed on similar duties, although both are engaged on the same terms of employment. Weekly hours of duty are less than those of operational firemen and the shift systems are different. Staff engaged specifically for control room duties are not covered by the operational firemen's pensions scheme: they are pensioned under the Local Government Superannuation Acts, under which the age of retirement is 65.

349. Training facilities in brigades are limited because of the size of each unit and the small number of staff recruited at any one time. Training is undertaken locally and designed to meet the requirements of the particular control room. Standards of training therefore vary from brigade to brigade. The larger brigades have found it possible to institute organised training before recruits are posted to a watch. In the smaller brigades, training is carried out in the control room under the supervision of the officer-in-charge.

350. Fire brigade control rooms make an essential contribution to the effi functioning of brigades, and from the evidence we have received it is appare women are well suited to control room work. If, as we recommend in Chapt fire brigades in the future are larger and more uniform in size, they should be enough to support control rooms staffed by specialist personnel. We accept where appropriate, disabled operational firemen should be employed on co room duties, but we do not think that the practice in some brigades of using operational firemen on these duties should be continued. We RECOMME that as a matter of policy those brigades which have not already done so sh consider employing firewomen for control room duties.

351. The National Board for Prices and Incomes in their Report[1] on fire ser pay did not consider that the pay of control room staff should be linked to th operational firemen, and recommended that new rates of pay should be nego in line with the rates paid for similar work elsewhere but taking account of differences in working conditions. We do not think there is any justificatio women control room staff receiving lower rates of pay than men performing same duties. We understand, for example, that in some control rooms manned firewomen and firemen, firewomen with supervisory duties receive less pay the men they are supervising. We consider that the existence of different rate pay for men and women performing the same duties must, therefore, act a deterrent to maximum efficiency; and that equal pay would help the servic attract and retain female recruits of the necessary quality. We accordingly endo the Board's recommendations that new rates of pay should be negotiated control room staff and RECOMMEND that men and women should get equ pay for the work. We accept, however, that fire authorities should continue to ha discretion, when employing disabled operational firemen on control room du to regard them for pay and pension purposes as operational firemen.[2]

352. We deprecate the present system of employing staff up to the age of 65 shift work in control rooms, where constant alertness is required. We do not thi that this practice can promote efficiency and we believe that it should be chang We therefore RECOMMEND that control room operators should be tran ferred, perhaps at the fireman's retirement age of 55, to other duties within brigade or in another department of the local authority. Provision should be ma that, where for any reason such transfer is not practicable, control room operat should be granted the pension to which they would have been entitled at the age 65. We understand that such practices have obtained in similar circumstances other local authority services.

353. With the reorganisation of the fire service into larger units and the tre towards centralised mobilising arrangements, many of the smaller control roo will disappear. Control room operators in the future will generally be employed larger groups and we RECOMMEND that promotion procedures for contr room staffs should be reviewed and some measure of standardisation achieve We would envisage that this would be a task for the enlarged Fire Department the Home Office.

1. Report No. 32.

2. The Committee understand that the principle of equal pay for male and female cont room staff has now been agreed by the National Joint Council for Local Authorities' Fi Brigades and will be introduced progressively over three years commencing 1st January, 19

TIME SAVING PROCEDURES IN BRIGADE OFFICES AND IN FIRE PREVENTION DEPARTMENTS

354. We feel that some of the time spent by experienced firemen on routine office matters could be saved by introducing modern organisation and method techniques, such as standardised reporting forms, greater use of dictating machines, etc. We RECOMMEND that the enlarged Fire Department of the Home Office should review these matters.

355. We were surprised to note in the course of our inquiry that for the purpose of making recommendations on means of escape under existing legislation, fire prevention departments of brigades themselves prepare detailed plans of the buildings concerned, and, moreover, that trained fire brigade officers were being employed on this task. We consider this a wasteful use of skilled manpower and we can see no good grounds why the management of the premises applying for an escape certificate should not themselves provide suitable plans for the fire authority. We accordingly RECOMMEND that all legislation requiring the provision of adequate means of escape in particular classes of occupancy should place a statutory obligation on the owners or occupiers to provide, at the request of the local authority responsible for certifying the premises, appropriate plans of the building.

STANDARDS OF FIRE COVER

356. Recommended standards of fire cover were drawn up nationally and revised in 1958 by a joint committee of the Central Fire Brigades Advisory Councils. In accordance with these standards, the fire cover to be provided in an area is assessed by the fire authority in relation to the fire risk and in terms of the time within which the first appliances should arrive at fires and the number of men and appliances which should comprise the first attendance. We were informed that the standards of fire cover provided by fire authorities were kept under continuous review in the light of changing circumstances and were one of the principal criteria by which H.M. Inspectors assessed the manner in which fire authorities discharged their statutory responsibilities under the Fire Services Acts.

357. We have concluded in paragraphs 59 and 80 that an improvement in fire brigade attendance times would not have more than a marginal effect in reducing fire fatalities or property losses. We have no grounds for believing that existing recommended standards of fire cover are too low or that the standards applied by fire authorities in making provision in their areas fall short of those recommended.

358. The standard of fire cover provided and the duty systems adopted govern the size of whole-time and retained manpower establishments of brigades. As about two-thirds of the total cost of fire brigade provision comprises the pay, pensions and uniform of firemen, it follows that standards of fire cover and duty systems are the most important factors governing the cost of the fire service. We have referred in Chapter IV to the need for these two factors to be kept under continuous review by the strengthened Fire Department of the Home Office, in the light of research into fire incidence, fatalities and losses. We recognise that each fire authority is best able to judge the needs of their area, and that in applying standards regard must be had to ensuring that safety standards are not endangered by over-emphasis on economy. Nevertheless, we consider that the provision of

larger fire authority areas and revision of boundaries which we recommend in Chapter III will provide an opportunity for reviewing this matter and for effecting some economies in fire brigade provision, which in our view should not be missed. We RECOMMEND that the new fire authorities which will follow the reorganisation of local government should review the standards of fire cover in their areas in consultation with the Home Departments.

DUTY SYSTEMS

359. The type of duty system adopted by brigades is one of the main factors determining the number of men required to provide an effective and satisfactory fire service. We very much agree with the general approach of the National Joint Council for Local Authorities' Fire Brigades and the National Board for Prices and Incomes in devising means of encouraging men to offer longer hours of availability which, in the circumstances of the fire service, is the only way in which their measurable productivity can be increased. Extension of availability would result in a number of economies, for example in training, reduce the problem of recruitment and result in the service being more highly paid. We appreciate that circumstances vary widely in different areas and that there must be flexibility in the type of duty system adopted by individual brigades. Nevertheless, we feel that the basic principle of obtaining maximum availability of firemen is right for the service, and that one of the duties of the enlarged Home Office Fire Department should be to study all possible duty systems with these objects in mind and including their attractiveness to the men concerned.

360. We consider that the day manning system should be included early in these studies. Under this system, a whole-time member of a brigade is required to be available for duty for not more than 80 hours a week, of which not less than 45 hours is performed at the station on a day duty basis and the remainder on standby duty at home, on the understanding that the member will respond to any fire call received at any time during the standby period. A member who is working this system may, at the request of the fire authority, accept obligations similar to those of a retained member in respect of periods outside his normal hours, except that he is not required to attend for training and maintenance duties. We concur with the view expressed by the National Board for Prices and Incomes in paragraph 48 of their Report, that the wider adoption of this duty system could be one way of achieving the objective of a smaller and more highly-paid fire service. We appreciate that the day manning system presents problems, including that of tied houses, and that the Fire Brigades Union is at present opposed to it. Nevertheless, we would urge that the fire authorities and the Union get together and make an objective attempt to resolve these problems.

MORALE

361. The efficiency of any organisation inevitably depends on the morale of its employees and our investigations suggest that there is considerable scope for improving morale in the fire service. The Government Social Survey "The Fire Service and its Personnel" suggests that there is considerable dissatisfaction with the present relationships between officers and men and with the pattern of communications within some brigades. Our own investigations lead us to believe

that in view of the long management chain in the service, insufficient attention has been paid to these matters.

362. We have recommended in Chapter VIII that the new accelerated promotion course which we propose should include supervisory training, and that more management training be included in command courses and courses for chief officers. The need for skilled and perceptive handling of staff relations cannot be over-emphasised, and for this reason we lay particular stress on the need for the extension of management and supervisory training and on the use of modern organisational and personnel practices in the fire service. We RECOMMEND that supervisory ranks at all levels should be given more supervisory and management training appropriate to the rank, with particular emphasis on the skills of effective communication and the handling of human relations.

363. We RECOMMEND that where such appointments have not already been made, consideration should be given to the appointment of suitably-trained uniformed personnel officers in brigades. They would not take over officers' managerial responsibilities for their men, but would be available to give professional advice on personnel matters, against a background of training in this specialist field. As management and supervisory training and the use of modern organisational and personnel methods in the fire service increase, we hope that the widely held impression that the fire service involves unnecessary authoritarian discipline will disappear.

364. While the management structure itself must remain the principal means of communications within brigades, we see the need for the establishment in every brigade of a consultative committee for the local discussion of all aspects of management other than pay and conditions of service, and we RECOMMEND accordingly. We emphasise that the constitution of these committees should be based on members of brigades elected for the purpose by their colleagues and not on nominations by the trade union or staff association to which they belong. The committees should not confine themselves to grievances and welfare matters, but should provide also a forum for the discussion and explanation of technical and managerial matters. They should prove to be a useful addition to the communications structure of brigades, provided there is goodwill and determination on both sides to make them work.

CHAPTER XIII

EXISTING FIRE PREVENTION LEGISLATION

INTRODUCTION

365. The term fire prevention implies measures to reduce the risk of fire breaking out, while fire protection denotes measures other than fire-fighting operations designed to protect life and/or property when a fire does occur. For convenience, we use the term fire prevention to cover all aspects of fire defence short of actual fire-fighting operations, and to include:—

(*a*) measures controlling possible causes of ignition to minimise the risk of fire breaking out;

(*b*) precautions in the design and construction of buildings to reduce the risk of fire breaking out, to restrict the spread of fire within the building of origin, and to prevent its spread to other buildings;

(*c*) the provision of adequate means of escape in case of fire for the occupants of buildings and measures to ensure that they can be used;

(*d*) measures regulating the safety requirements of consumer goods to prevent injury or death from fire;

(*e*) measures to ensure that appropriate action is taken in case of fire including its detection, the giving of warnings, calling the fire service, the initial attack on the fire by the occupants of the building and automatic means of dealing with fires, such as by sprinkler systems;

(*f*) measures to assist the work of the fire service in case of fire, including the provision of adequate access to the property, the provision of fire lifts, fire hydrants, fire-fighting staircases, etc.; and

(*g*) training, education and publicity directed at the dangers of fire and how to deal with fires when they break out.

366. There are three ways, all of which are used, in which owners and occupiers of premises can be brought to make fire prevention provision. They can be compelled by legislation, they can be induced to do so through fire prevention advice, publicity and education and they can be persuaded through financial inducements provided by the central Government or the insurance companies. In this Chapter we consider the fire prevention measures required by legislation. We refer to the other matters in Chapters XV to XVII of our Report.

THE PURPOSE OF EXISTING FIRE PREVENTION LEGISLATION

367. All existing general fire prevention legislation, as distinct from some local legislation, has been justified on grounds of the protection of life and public safety. The beneficial effect of this legislation on property losses is incidental; no general fire prevention legislation has been directed specifically at the protection of property. The legislation applies mainly to places where people work or to which they resort in any numbers of members as the public and not to private dwellings

occupied by single families. Further, the legislation has tended to develop in response to particular problems as they have arisen, and there are, therefore, numerous statutes for which a number of government departments is responsible and which place responsibility for enforcement on a variety of local or licensing authorities. The legislation falls broadly into five categories described in paragraphs 368 to 374.

LEGISLATION REGULATING THE STRUCTURE OF NEW BUILDINGS, ALTERATIONS AND EXTENSIONS TO EXISTING BUILDINGS AND A MATERIAL CHANGE OF USE OF EXISTING BUILDINGS

368. The relevant provisions are the Building Regulations 1965[1] made under the Public Health Act 1936[2] as subsequently amended, which operate throughout England and Wales (excluding the former administrative county of London, where separate legislation applies). The enforcement authority is the building regulation authority, that is to say the council of a county borough or county district. The structural fire prevention provisions are directed at reducing the risk of fire breaking out, restricting the spread of fire within the building of origin and preventing the spread of fire between buildings. Separate regulations, the Building Standards (Scotland) Regulations 1963,[3] have been made in Scotland under the Building (Scotland) Act 1959.[4] These prescribe requirements not only for structural fire precautions similar to those in England and Wales but also for means of escape and for measures to assist the fire service in the event of fire. Fire authorities as such have no responsibilities or duties under either set of regulations, although in practice their advice is often sought informally by building regulation authorities and invariably when application is made for relaxation of the fire provisions of the regulations. Premises of the Crown (which include hospitals) are exempt under both sets of regulations. Under the regulations for England and Wales, the exemption extends to premises of statutory undertakers and maintained and grant-aided educational establishments.

369. In addition, section 59 of the Public Health Act 1936, which applies only to England and Wales, empowers building regulation authorities to require, in certain categories of buildings where people assemble, the provision of satisfactory means of ingress and egress and of passages and gangways, including their maintenance in a free and unobstructed state. Individual local authorities have also acquired under local Acts additional powers to prevent danger from fire and to assist fire-fighting in various classes of premises. Some local Acts, for example, extend statutory control to premises not otherwise covered and enable fire authorities to require fire prevention measures in large buildings or in buildings in which hazardous substances are used, additional to those required by general legislation.

LEGISLATION COVERING CERTAIN CLASSES OF PREMISES WHEN THEY HAVE BEEN OCCUPIED

370. The two main statutes in this category are the Factories Act 1961 and the Offices, Shops and Railway Premises Act 1963, which apply to England, Wales

1. S.I. 1965 No. 1373.
2. 1936 C.49.
3. S.I. 1963 No. 1897 (S.102).
4. 1959 C.24.

and Scotland and make provision for the safety, health and welfare of persons in their places of employment. The main fire prevention requirements of the legislation are that there must be means of escape, properly maintained and kept free from obstruction; an effective fire alarm system, regularly tested or examined; adequate fire-fighting equipment, properly maintained and ready for use; and arrangements for ensuring that employees are familiar with means of escape and their use, and with the routine to be followed in case of fire. The arrangements for enforcement are described in paragraphs 375 and 376 below.

371. In addition to these two Acts, there is a substantial body of legislation directed at the protection of people living in various kinds of premises other than dwelling houses or congregating in places of entertainment and other places of resort. Examples of this are:—

(*a*) Section 60 of the Public Health Act 1936, which applies to flats, hotels, residential institutions, etc., which are more than two storeys high, and empowers building regulation authorities to require the provision of such means of escape as they deem necessary from each storey having a floor more than 20 feet above the ground.

(*b*) The Housing Acts 1961[1] and 1969[2] and the Housing (Scotland) Act 1966[3] under which housing authorities have power to require in houses in multiple occupation the provision of such means of escape in case of fire as they consider necessary.

(*c*) Statutes such as the Licensing Acts 1964[4], the Theatres Act 1968[5] and the Gaming Act 1968[6] which allow for the imposition of legally enforceable fire prevention requirements in premises used for particular types of public entertainment.

We have not attempted to describe all the legislative provisions relating to fire prevention. We have, however, listed the relevant legislation in Appendices E and F.

LEGISLATION REGULATING THE SAFETY OF CONSUMER GOODS AT THE POINT OF SALE

372. Under the Consumer Protection Act 1961,[7] regulations have been made prescribing safety requirements in respect of various classes of consumer goods, for example, oil heaters, children's nightdresses and toys. This legislation has been directed at obviating or restricting the risk of personal injury from ignition. Prevention of outbreak of fire in the home is also regulated to some extent by codes of practice, by British Standards and by the Institution of Electrical Engineers' Wiring Rules. Domestic electrical appliances are tested by the British Electrical Approvals Board and the Electricity Council's Appliance Testing Laboratories, and gas appliances have been approved under a voluntary approvals scheme operated by the Gas Council. All these measures regulating the safety of consumer goods and equipment apply only at the point of sale. There is no control over the subsequent use of these articles in the home.

1. 1961 C.65.
2. 1969 C.33.
3. 1966 C.49.
4. 1964 C.26.
5. 1968 C.54.
6. 1968 C.65.
7. 1961 C.40.

LEGISLATION PERTAINING TO PETROLEUM AND OTHER DANGEROUS SUBSTANCES AND EXPLOSIVES

373. The Petroleum (Consolidation) Act 1928,[1] which applies to England, Wales and Scotland, specifies the controls to be exercised over the storage and conveyance of petroleum spirit and other dangerous substances. The licensing authorities for the storage of petroleum spirit and the authorities responsible for enforcing regulations controlling conveyance are county borough and county district councils (in Scotland councils of counties or burghs). Under the Explosives Act 1875,[2] certain controls over the storage and conveyance of explosives are enforced by the councils of counties and county boroughs (in Scotland by the councils of counties and burghs) and in certain circumstances by county district councils.

FIRE PREVENTION ADVICE

374. Finally, legislation with a different purpose is section 1(1)(*f*) of the Fire Services Act 1947, which places a duty on fire authorities to give, when requested, fire prevention advice in respect of buildings and property in their areas.

THE ROLE OF FIRE AUTHORITIES AND FIRE BRIGADES UNDER EXISTING FIRE PREVENTION LEGISLATION

375. The role of fire authorities in the enforcement of fire prevention legislation varies according to the statute. For example, the Building Regulations and sections 59 and 60 of the Public Health Act 1936 are administered by the building regulation authority and the fire authority as such have no powers. The advice of the fire authority is frequently sought, but this is not a legal requirement and the practice varies in different areas. Similarly, with the enforcement by district councils of many of the Acts relating to fire prevention in places of public entertainment, the views of the fire authority are not always sought. Under the Factories Act 1961, fire authorities are normally responsible for granting means of escape certificates, but the provisions dealing with fire alarms and fire-fighting equipment are a matter for H.M. Factory Inspectorate (which have power to delegate the work of inspection to the fire authority). Under the Offices, Shops and Railway Premises Act 1963, fire authorities are normally responsible for enforcing all the fire prevention provisions. There are certain types of premises, however, to which the fire prevention provisions of the Factories and Offices, Shops and Railway Premises Acts apply, where enforcement is entirely the responsibility of H.M. Factory Inspectorate. For example, they and not the fire authority are responsible for the enforcement in Crown premises of the fire prevention provisions of the Factories Act, and in Crown and local authority premises of those of the Offices, Shops and Railway Premises Act.

376. There is the further complication that, where fire authorities are responsible for enforcing fire prevention legislation, it does not necessarily follow that they do this through their fire brigades. Some authorities use other departments for the purpose.

1. 1928 C.32.
2. 1875 C.17.

MODIFICATIONS AND EXTENSIONS OF EXISTING FIRE PREVENTION LEGISLATION ALREADY PROPOSED OR IN PREPARATION

377. We were informed by the government departments concerned with the safety of life in various categories of premises that a number of measures to improve the present law were either contemplated or in the course of preparation.

378. The Ministry of Housing and Local Government informed us that it has long accepted that means of escape provisions should be included in the Building Regulations for England and Wales. This would require amendment of the Public Health Act 1936.

379. The Home Office and Scottish Home Health Department have for some time had in the course of preparation legislation to rationalise and strengthen the fire prevention law relating to the life risk in certain types of residential establishments, such as hotels, hospitals and children's homes, and in all places of entertainment and public resort, such as cinemas, theatres and clubs. The Secretary of State would have power to extend the legislation to other types of premises. The form of control to be imposed in this legislation would parallel that contained in the Offices, Shops and Railway Premises Act 1963, and would place responsibility on fire authorities for inspecting and certifying all premises covered by the Act.

380. Finally, the Department of Employment and Productivity are preparing a comprehensive revision of the Factories and Offices, Shops and Railway Premises Acts, which will widen the scope of these provisions, bring existing premises not at present covered within the ambit of a single new Act and place responsibility on the fire authority for inspecting and certifying all premises covered by the Act, other than Crown and certain local government premises which would be the responsibility of H.M. Factory Inspectorate. The latter would also have certain reserve powers in relation to fire risks arising out of industrial processes in factory premises.

CHAPTER XIV

FUTURE FIRE PREVENTION LEGISLATION

INTRODUCTION

381. Although, as shown in Chapter II, fatalities in fires in places of employment and public resort amount to only about 80 per year or 11% of total fire fatalities, it is, nevertheless, in such places that large numbers of people are collectively at risk and that major disasters can occur, as was the case in the tragic fire in a factory workshop in James Watt Street, Glasgow, in November, 1968, when 22 persons died. It is also in such premises that most large property losses occur. Although the fire prevention measures required by law are justified solely on the basis of the protection of life and public safety, they undoubtedly have an important incidental effect in preventing or reducing property losses. Moreover, their very existence undoubtedly has the valuable indirect effect of helping to focus the attention of management on fire matters. We therefore consider that fire prevention legislation is one of the major weapons for attacking the fire problem and we attach the greatest importance to any measures which could improve its effectiveness, for example, by widening its scope, by making the requirements of the various Acts as uniform as possible and by seeing that its implementation is in the most suitable hands. In the following paragraphs we indicate what we consider to be the deficiencies and defects of existing legislation and our recommendations as to how they could be overcome. We have been glad to note that many of our recommendations are in line with the proposals for new legislation referred to in paragraphs 377 to 380. These proposals have been under consideration by the Government for a number of years and we RECOMMEND that they should now be incorporated in legislation with the recommendations which we make in this Chapter as quickly as possible.

CONSOLIDATION OF FIRE PREVENTION LEGISLATION

382. It has been represented to us by a number of organisations that all fire prevention legislation should be consolidated in a single comprehensive Fire Safety Act. We appreciate that this would be of great convenience to the fire service and to other bodies concerned with fire prevention, but we are satisfied that it is not a practical proposition to combine the fire prevention provisions of the Building Regulations with those of the legislation applying to premises once they have been occupied. The fire prevention provisions of the Building Regulations, important as they are, are only part of the totality of provisions in the Regulations and have to be considered in the context of all the other structural requirements of the Regulations. In our view, the proposals for new legislation to which we have referred in paragraphs 377 to 380 would go a considerable way towards consolidating existing legislation, particularly if the legislative proposals of the Home Departments and of the Department of Employment and Productivity could be amalgamated in a single statute. If this could be brought about there would be only two main branches of fire prevention legislation, one applying

to new and altered buildings and the other to premises once they had been occupied. All that is needed in these circumstances to obtain most of the advantages of a single Fire Safety Act is to ensure that, where legislation in the two branches overlaps in its application to particular premises, there should be common codes of practice of national application. We RECOMMEND, therefore, that the central Government should ensure the preparation of national codes of practice for use where the fire prevention measures required under different legislation have similar purposes. These codes should standardise the essential requirements but should leave a degree of flexibility on details to enable enforcing authorities to apply them in accordance with the needs of individual premises. In the preparation of such codes the views of all the organisations concerned, that is to say the Government Departments, professions, organisations representing the local authorities, the building industry and the fire service would have to be considered. We leave open whether or not such codes should be produced as statutory regulations.

THE ENFORCEMENT OF FIRE PREVENTION LEGISLATION IN PREMISES ONCE THEY ARE OCCUPIED

383. It has been represented to us by the Home Departments and by the fire service associations that fire authorities should be responsible for enforcing all fire prevention legislation directed at premises when they have been occupied, and that fire brigades should always be used by the fire authority for carrying out their statutory responsibilities. It has been pointed out that only men with practical fire-fighting experience can properly assess the adequacy of the fire prevention provisions made in particular premises, since only they have an adequate knowledge of what constitutes the chief fire dangers, the way in which fire is likely to behave in the particular circumstances of the occupancy and the likely reactions in a fire of people in the building. The same considerations apply to follow-up inspections of premises to ensure that these measures are being properly maintained and that there are no changes in circumstances calling for them to be altered. A further justification for the inspection of fire prevention measures being carried out by fire brigades is that firemen themselves may need to make use of these measures if a fire breaks out in the premises. We strongly support this view and RECOMMEND that fire authorities, using their fire brigades for the purpose, should be responsible for enforcing all legislation applicable to premises once they have been occupied.

AMENDMENTS TO THE BUILDING REGULATIONS

Means of escape and assistance to the fire service

384. There is at present no power under the Public Health Acts to include in the Building Regulations for England and Wales (as there is for Scotland under the Building (Scotland) Act 1959) requirements for the provision and protection of adequate means of escape and other structural measures to assist fire brigades in fighting a fire, for example, adequate access for fire appliances, fire mains and fire lifts. At present the provision for means of escape made in the initial design of a new building can be rather haphazard. Whether such provision is satisfactory

depends on how fully there have been consultations between the building regulation authority and the fire authority or, failing this, between the architect who designed the building and the fire authority. The result may be that when the building is occupied the fire authority, before they are prepared to issue a means of escape certificate under the Factories or Offices, Shops and Railway Premises Acts, require alterations which could more cheaply and conveniently have been incorporated in the original design of the building. It would be more convenient for all concerned if the Building Regulations covered all structural fire prevention requirements, and means of escape, etc., were approved so far as is practicable at an early stage of the design of the building. We RECOMMEND, therefore, that the Building Regulations for England and Wales should cover the provision and protection of means of escape and other structural measures to assist fire brigades in fire-fighting and the Public Health Act 1936 should be amended to make this possible. When the Building Regulations for England and Wales have been widened as proposed above, we consider that it will become all the more important that the views of fire brigades on the fire prevention measures proposed should be obtained by the building regulation authority before approving plans for new or altered buildings. We RECOMMEND that it should be a mandatory duty of the building regulation authority in England and Wales and in Scotland, where it is not also the fire authority, to consult the fire authority before approving plans of new or altered buildings, so that the fire brigade's views may be taken into account. Where the building regulation authority is also the fire authority the views of the fire brigade should be obtained as a matter of course. This recommendation is not intended to alter in any way the responsibility for the final decision, which would remain with the building regulation authority. Where any question of the relaxation of the fire prevention requirements of the Building Regulations arises, the fire brigade's views should always be taken into account by the body responsible for authorising the relaxation.

Application to premises belonging to the Crown and to statutory undertakers

385. Under the present law, premises belonging to the Crown (including hospitals) and in England and Wales premises belonging to statutory undertakers are exempt from the requirements of the Building Regulations. Crown premises and those of statutory undertakers are subject to the fire prevention requirements of the Factories and Offices, Shops and Railway Premises Acts and it appears anomalous that these premises should continue to be exempt from the Building Regulations, particularly if these include requirements for means of escape, etc. Moreover, we were given to understand that it is Government policy generally that Crown premises should not be treated differently from premises in private ownership and we were assured by the Ministry of Public Building and Works in their evidence to us that, despite this exemption, in planning new works and adaptations of Crown premises full account is taken of the requirements of the Building Regulations relating to the life risk from fire. None of the evidence we have received has convinced us of the need for the continuance of these exemptions and we RECOMMEND that the Public Health Act 1936 and the Building (Scotland) Act 1959 be amended to enable the fire prevention provisions of the respective Building Regulations for England and Wales and for Scotland to apply to Crown premises, and for England and Wales to those of statutory undertakers.

Application to schools

386. We consider that in England and Wales the exemption of maintained and grant-aided establishments from the fire prevention provisions of the Building Regulations is equally anomalous. It was represented to us that school premises constitute a low fire risk because they are usually isolated from other buildings, are often single-storey establishments and their occupants are always under close supervision. In these circumstances it was contended that compliance in England and Wales with the Building Regulations was unjustifiable in view of the increased costs which this would entail. We cannot accept these as valid arguments for educational establishments not complying, as other premises have to, with reasonable standards of fire prevention directed at the life risk. School buildings are used with increasing frequency for purposes other than the education of children, as places of assembly for the public, as hostels or places of recreation and for adult education in the evening. We consider that the use of educational establishments for these other purposes invalidates the argument that the users are always under close supervision. As regards cost, the fire prevention provisions required under the Building Regulations represent the minimum needed to ensure safety of life and vary according to the use to which buildings are put. If schools were brought under the Building Regulations they could form a special use class, the requirements for which would be the minimum consistent with the risk. We RECOMMEND, therefore, that the Building Regulations in England and Wales should apply to maintained and grant-aided educational establishments.

Application to old buildings

387. As stated in Chapter II, we are concerned at the growing frequency of large fires in old buildings now used for purposes other than those for which they were designed, e.g. textile mills now used for fabrication of plastic products. Modern fire prevention standards can be required of old buildings on change of use, but the present use classes in the Regulations are few in number and widely drawn. We RECOMMEND that they be re-examined to see to what extent a further breakdown of use classes would be practicable, particularly within the classes "warehouse" and "industrial", to ensure that where it is proposed to manufacture or store an entirely different product or to change materially the production process in a building there would be power to review for fire prevention purposes its suitability for the new use. We further RECOMMEND that the standards applied for this purpose should not in any way be tempered by the fact that the cost might make the proposed change of use impracticable. Where old buildings are altered or extended the Building Regulations apply to the new work and to a considerable extent to the unaltered parts of the building. Building regulation authorities apply the Regulations with discretion, as strict adherence to their provisions would in some cases necessitate the total reconstruction of the building. We are concerned that all old buildings should be brought to modern fire prevention standards as quickly as possible, and we RECOMMEND that when alterations are made compliance with these parts of the Regulations should be required as a general rule and that lower standards should be accepted only exceptionally.

AMENDMENTS TO LEGISLATION DIRECTED TO PREMISES ONCE THEY ARE OCCUPIED

388. As already recommended in paragraph 383, the responsibility for certifying means of escape and for enforcing the provisions relating to fire alarms and

fire-fighting equipment in all premises to which the legislation applies should rest with the fire authority and be administered on their behalf by the fire brigade. We accept, however, that H.M. Factory Inspectorate should have certain reserve powers in relation to processes, methods of work and materials representing a significantly high fire risk, and the provision of fire-fighting equipment involving toxic material; and that H.M. Inspectors of Mines and Quarries should have certain reserve powers in relation to the application of the legislation to mines and quarries.

389. Even when the means of escape provisions are included in the Building Regulations there will be occasions when the fire authority will require structural changes before certifying means of escape in an occupied building. These occasions will arise when the operations carried out in the building are different in some material respect from those specified at the time when building regulation approval was obtained. We RECOMMEND that, once the Building Regulations have been amended in the way we propose, it should be mandatory on the fire authority to consult the building regulation authority before requiring any structural alterations and that such alterations should not be to a standard higher than that required by the Building Regulations for a building of the particular class. This recommendation and that which we have made in paragraph 384, that it should be mandatory for building regulation authorities to consult fire authorities and through them fire brigades, emphasise the importance we attach to close liaison and consultation between officials of the building regulation authorities and fire brigades. This would be facilitated if the same local authorities were responsible for the enforcement of Building Regulations and the provision of fire brigades. We have drawn attention to this matter in Chapter III in our recommendations on the principles which should govern the organisation of the fire service.

Educational, Crown and local government premises

390. According to present intentions the new legislation proposed by the Home Departments (see paragraph 379) will not apply to educational establishments. For much the same reasons as we have given in paragraph 386 for recommending that Building Regulations should apply to maintained and grant-aided schools, we consider that all educational establishments should be covered by the Home Departments' proposed legislation. A further issue, if our recommendations are accepted, is whether legislation covering Crown and local Government premises and educational establishments once they are occupied should be enforced in such premises in the same way as in industrial and commercial premises, namely by fire brigades. In the past it has not been thought appropriate that fire officers employed by local authorities should inspect central Government premises or that fire authorities should be responsible for enforcing legislation applying to their own property. Consequently, enforcement of fire prevention legislation applying to Crown and local authority premises has rested with H.M. Factory Inspectorate. We are informed that in the case of educational establishments, to which no general fire prevention legislation applies, the inspection of premises for fire prevention purposes is carried out by H.M. Inspectors of Schools. We have recommended in paragraph 383 that the enforcement of fire prevention legislation in premises once they have been occupied should be carried out by fire brigades on the grounds of their knowledge and experience of the behaviour of

fire, and we can see no good reason why this argument does not apply with equal force to these particular classes of occupancy. We accordingly RECOMMEND that all fire prevention inspections of Crown and local government premises and of educational establishments should be carried out by fire brigades. We recognise that there may be legal difficulties in the event of the Crown or local authorities failing to carry out the fire prevention measures recommended by a fire brigade. However, we consider that these would arise only on rare occasions and that means can be found of resolving them. We also recognise that there may be security objections to officers of local authorities inspecting classified premises belonging to the Crown. When a fire breaks out in such premises there are no security objections to the fire service fighting the fire. We have no doubt that security problems can be overcome given goodwill on both sides, but should there be a valid objection to particular buildings being inspected by the local fire brigade then inspections should be made by the Fire Service Inspectorates of the Home Departments.

The regular inspection of premises to ensure that statutory fire prevention requirements are properly observed

391. We have discussed in earlier paragraphs the importance of follow-up inspections and have recommended that these should be carried out by members of fire brigades. At best, however, these official inspections can be only of limited frequency. It is most important that the statutory requirements placed on occupiers to ensure that means of escape are kept unobstructed, fire-warning and fire-fighting equipment are in working order, fire exit notices are properly displayed and employees are familiar with the action to be taken in case of fire, should be continually and effectively observed. The evidence we have received suggests that the attention paid to these matters in different premises and by different managements varies widely. All too frequently, particularly in the smaller or medium size establishments, there is uncertainty as to where ultimate management responsibility for these matters resides; there is no organised procedure for inspections or for remedying faults and deficiencies which they reveal; and the people actually carrying out inspections have neither authority themselves to order remedial action nor a prescribed means of access to higher authority for this purpose. This raises the question whether occupiers of premises in which any appreciable number of people work or to which they resort should be required to demonstrate that they have effective arrangements for carrying out the internal inspection, maintenance and other duties imposed on them by fire prevention legislation. In our view, such a requirement is highly desirable and should apply not only to industrial and commercial premises but to offices, shops, hospitals, hotels, schools, residential establishments, places of public resort, etc., that is to say to all premises which, if our recommendations are accepted, will be covered by the legislation referred to in paragraphs 379 and 380.

392. We RECOMMEND that the legislation directed to premises once they are occupied should provide that, in all premises in which more than 10 people are normally at risk, the owner or occupier should be required to nominate and appoint a senior member of the organisation to be responsible for ensuring the maintenance of all mandatory fire-fighting and fire prevention arrangements at the premises, and for devising and generally supervising an adequate procedure for ensuring that they are regularly inspected and that the results of these inspections are recorded. In the course of inspecting fire prevention arrangements in the

premises, fire brigade personnel will be aware of the procedure adopted in those premises and should have access to the records of such internal inspections. We consider it essential, however, that there should be no pressure on organisations to make their procedures conform to any standard pattern. Because of the variations in size, structure and operations of different organisations, the procedure adopted must be one which suits individual circumstances, provided that it is effective.

393. We consider that the incidental benefits resulting from this comparatively minor extension of fire prevention legislation could be very considerable. The nomination of a senior member of an organisation to be responsible for ensuring that mandatory fire prevention measures are properly maintained and for the establishment of a definite procedure for their inspection should create a greater awareness of the danger of fire in the organisation as a whole. This should lead to more attention being paid to such matters as unnecessary accumulation of inflammable wastes and inadequate precautions in the use of electrical equipment, which are frequent causes of fire and over which there is no statutory fire prevention control. As we point out in Chapter XVI, the inspection procedure, once it has been established to cover statutory requirements, could be extended voluntarily to fire prevention measures such as sprinkler and detector systems.

No-smoking rules

394. We have noted that one of the recommendations made by the jury in the Fatal Accident Inquiry into the fire at James Watt Street, Glasgow, on 18th November, 1968, was that restrictions on smoking in factories should be extended. In a statement made by the Secretary of State for Employment and Productivity in the House of Commons on 15th May, 1969, the Government accepted that there was a strong case for further legislation to restrict smoking in certain circumstances in the interests of safety. The Secretary of State undertook to consider, in the light of the jury's recommendation, the inclusion in the new Safety, Health and Welfare legislation (to which we have referred in paragraph 380) of a prohibition of smoking in places where highly inflammable materials are present and the circumstances are such that smoking would give rise to a risk of fire. We have drawn attention in Chapter II to the fact that one of the major causes of fire in industrial and commercial premises is smoking. We therefore welcome this undertaking by the Government and hope that provision for the prohibition of smoking in more vulnerable parts of buildings will be included in the new legislation.

Houses in multiple occupation

395. We have referred in paragraph 371(*b*) to housing authorities' powers under the Housing Acts to require in houses in multiple occupation, that is to say, houses which are occupied by persons who do not form a single household, the provision of such means of escape in the case of fire as they consider necessary. Where the housing authority is not the fire authority the latter has to be consulted in particular cases. Many fire fatalities occur in houses in multiple occupation. We consider that a deficiency in the present provisions is that there is no power to ensure that the means of escape are kept free from obstruction and can be safely and effectively used at all times. We RECOMMEND that consideration should be given to strengthening the powers under the Housing Acts to enable these requirements to be enforced and to secure adequate inspection.

Other residential accommodation

396. There has been public disquiet in recent years at the number of deaths and casualties in fires at hotels and residential institutions, such as hospitals and old people's homes. At present, section 60 of the Public Health Act 1936 empowers building authorities in England and Wales to require the provision of means of escape from all such premises, including flats, which have a storey more than 20 feet above the ground. In Scotland means of escape from such premises can be required under the Building (Standards) Scotland Regulations. There are no powers, however, to ensure that means of escape are properly maintained and kept free from obstruction and that other essential fire prevention measures are provided. We therefore welcome the proposed Home Departments' legislation which will rationalise and strengthen the law requiring fire prevention measures to be taken in such premises once they are in use, and will empower fire authorities to ensure that appropriate standards of fire prevention are maintained.

LEGISLATION PERTAINING TO PETROLEUM AND OTHER DANGEROUS SUBSTANCES AND EXPLOSIVES

397. We understand that it is the practice for the licensing authority under the Petroleum (Consolidation) Act 1928 to appoint a petroleum officer, who may be a fire officer, a public health inspector, an officer of the weights and measures department or engineer's or surveyor's department or any other officer of the local authority who is regarded by them as adequately competent to perform this function. Similarly, an explosives officer is normally appointed by the licensing authority to carry out their responsibilities under the Explosives Act 1875, but, as in the case of the petroleum officer, this duty may be given to an officer of any one of the authority's departments. The risk of fire must always be a major consideration in exercising controls under these two Acts. We RECOMMEND, therefore, that the responsibilities for dealing with the safety provisions of these Acts be allocated to members of fire brigades, rather than to officers of other local authority departments.

FIRE PREVENTION REQUIREMENTS OF LOCAL ACTS

398. We referred in paragraph 369 to the fact that under local Acts certain local authorities have acquired fire prevention powers additional to those provided by general legislation. We have not received much evidence about, or studied in detail, the purpose and scope of these additional powers. But with the changes in local authority boundaries which will follow from the proposed reorganisation of local government, and the more comprehensive fire prevention legislation which will result from the proposals described in paragraphs 377 to 380 and our recommendations, we consider the need for many of these additional local powers should disappear. We therefore RECOMMEND that the need for their continuing existence should be reviewed by the Home Office through the central government consultative machinery on fire prevention to which we refer in paragraph 400.

FIRE PREVENTION IN PRIVATE DWELLINGS

399. The majority of deaths in fires occur in the home, frequently as the result of carelessness, neglect or misuse of electrical wiring and apparatus and other

heating appliances. None of the general legislation to which we have referred in Chapter XIII applies to private single dwellings, except to the extent that the Building Regulations control their general construction, design and alteration and the installation of certain types of heating equipment. We realise that no law can prevent the lack of thought or care which is the cause of so many fire fatalities in the home; and that legislation requiring fire prevention measures to be taken in domestic premises to prevent careless behaviour and practices would necessitate entry for the purposes of enforcement, which would be impracticable on the scale required and would in any event cause considerable resentment. The difficulty of enforcement is illustrated by section 11 of the Children and Young Persons Act 1933[1], under which it is an offence if a child under the age of 12 is allowed to be in a room with an unguarded or inadequately guarded fire and as a result suffers a serious burn. Because enforcement is impracticable, an offence only comes to light after a child has suffered and prosecution of the distressed parent is understandably rare. The alternative of laying a duty on the householder to guard fires in rooms in which young children are present could not be enforced without unrestricted powers of entry. We do not consider it practicable, therefore, to legislate in this way to attempt to reduce fire fatalities in the home, but we consider it essential that every effort be made to protect people from their lack of thought and care in the use and maintenance of electrical and other apparatus. To this end we RECOMMEND that the powers under the Consumer Protection Act 1961 to prevent the sale of consumer goods which are unsafe in the hands of the ordinary householder and his family should be applied as widely as possible. This should apply to the materials and equipment used by householders to repair, maintain or improve their houses, as well as to consumer goods in the more traditional sense. We also RECOMMEND that existing powers to ensure that electrical, gas and oil installations and appliances are properly installed and used in private dwellings should be kept under review and where possible strengthened, for example, by providing powers for periodic inspection.

THE ROLE OF THE HOME DEPARTMENTS IN FIRE PREVENTION

400. The present limited role of the Home Departments in fire prevention matters will change if our recommendations for a strengthened Fire Department of the Home Office are accepted. For example, H.M. Fire Service Inspectorates will be responsible for reporting on the efficiency with which fire authorities carry out the whole range of their fire prevention functions under the various statutes. For convenience of presentation our detailed recommendations on these matters have been given in Chapter IV. We have described in Chapter XIII the multiplicity of fire prevention legislation for which central Government Departments are responsible. The complexity of this legislation will be reduced when the proposals for new legislation described in paragraphs 377 to 380 come into force but, nevertheless, a number of Departments will remain involved with fire prevention matters. Some machinery is necessary to ensure that there is appropriate co-ordination of policy and of methods of dealing with particular problems. At present no single Government Department has responsibility for this matter and we RECOMMEND that the Home Office, as the Department with the widest general interest in fire problems, should be given this responsibility and should set up and maintain the necessary consultative machinery for the purpose.

1. 1933 C.12.

FIRE PREVENTION OFFICERS

401. We have emphasised in paragraph 383 that people undertaking fire prevention duties can be fully effective only if they have considerable knowledge and operational experience of the behaviour of fire. In addition to ensuring that all members of brigades have adequate experience and training in fire prevention matters, we also consider it important that a high proportion of the officers of a brigade should alternate between fire prevention and operational duties during the course of their careers. We therefore RECOMMEND that the majority of officers receive specialist fire-prevention training and have their initial experience of fire prevention duties at an early stage of their careers. In this way it can be assured that fire prevention officers have reasonably up-to-date experience of fire-fighting and also that the majority of fire brigade officers have the experience of all aspects of fire brigade work which is necessary for promotion to senior officer rank.

402. Fire-prevention work is becoming an increasingly important part of fire brigade activities and we feel that it is important that the officer in charge of fire prevention matters in a brigade should be of high rank and of wide all-round operational and fire prevention experience. With the present large number of brigades, some of which are very small in size, this is not always practicable but it should become so if our recommendations in Chapter III for larger brigades are implemented. We RECOMMEND that the officer in charge of fire prevention should be of sufficiently senior rank to report direct to the chief officer and that he should normally be an assistant chief officer.

403. It has been suggested to us that professionally qualified civilian staff should be attached to fire prevention departments of the large brigades which would result from local government reorganisation. The reason for this suggestion is that some aspects of fire prevention work call for specialist engineering and other professional knowledge, which men coming up through a single-tier entry fire service cannot be expected to possess. The need for professionally qualified staff arises largely in connection with structural aspects of fire prevention and these are the responsibility of the building regulation authority, who have the necessary qualified staff for the purpose. The other main need for professionally qualified staff arises in connection with goodwill advice which fire brigades are asked to provide under section 1(1)(*f*) of the Fire Services Act on matters which may involve complex technical considerations. These involve such a wide range of technical subjects that it would be quite impracticable to have them represented on a fire brigade's staff. The best and most economic way for brigades to obtain specialist advice would be by consultation with appropriate specialists in other local government departments, in government research bodies or in industry. We do not see any need at present, therefore, for professionally qualified civilian staff to be attached to brigades for fire prevention purposes.

CHAPTER XV

TECHNICAL DEVELOPMENTS

INTRODUCTION

404. Technical effort over a long period of years has resulted in firemen having a comprehensive armoury of equipment which enables them to tackle fires of a type and severity which would have been unmanageable 50 years ago. While continued improvement of fire-fighting methods and equipment is necessary and desirable, the heart of the fire problem in Great Britain now lies elsewhere. All those engaged in fire-fighting who have given evidence to the Committee have emphasised the over-riding importance of early detection of a fire, the prompt summoning of the fire brigade and, wherever possible, immediate action to extinguish or contain the fire, particularly with automatic extinguishing equipment. We should, therefore, like to see much more technical endeavour directed towards the development of automatic detection, alarm and fire-fighting systems.

AUTOMATIC FIRE-FIGHTING

405. Automatic fire-fighting systems generally consist of sensitive automatic detection equipment which responds to heat, flame or smoke and registers a signal which simultaneously operates fixed extinguishing equipment (water sprinklers or apparatus releasing carbon dioxide). At the same time an alarm is transmitted either to some central point on the premises, or additionally directly to the fire brigade or to a commercial alarm station. We understand that there are some 30,000 sprinkler systems in Great Britain, of which only a few hundred transmit an alarm directly to brigades or commercial alarm stations.

406. Historically, the first attempts to design apparatus for the automatic detection and fighting of fires were in relation to the high fire risk in textile mills. Sprinkler systems, initiated in the United States of America during the latter half of the 19th century, were dramatically successful. They have been developed enormously over the past 70 years and are the only totally automatic systems in widespread use today for simultaneously detecting and fighting a fire. Sprinkler systems are installed mainly in industrial and commercial premises to protect property. Their installation by statutory requirement, which as we have explained is directed at the life risk, is limited to certain circumstances in departmental stores and other large uncompartmented buildings. The equipment has now been brought to a high pitch of reliability, provided that it is properly maintained. This has been recognised by the insurance companies who, for high risk property where sprinklers are particularly suitable, give large reductions in premium rates to provide a financial incentive for their installation.

DETECTORS

407. During the past 30 years there has been increasing activity in the commercial development of electric and electronic devices for the automatic detection

of smoke, heat or flame. When these automatic detectors are activated, they transmit an alarm signal to a central point on the premises. Where detectors are installed in continuously-manned premises, it is usual to rely on the fire being reported to the fire brigade by telephone. In premises which are not continuously manned some form of automatic system for calling the fire brigade is used. The most reliable system is by automatic transmission of a signal over a private wire directly connected to a fire station, or to a commercially-operated central alarm station which calls the brigade. Great progress has been made in the design of the detector heads, which are now reasonably reliable in their operation. The major problems with detector systems lie with the automatic transmission of the alarm signal, which is costly and can involve an unacceptable number of false alarms.

408. As in the case of sprinklers, the main use so far of automatic detectors has been in industrial and commercial premises with the object of protecting property. There is no statutory requirement for anyone to install detector systems. It is a requirement that all industrial and commercial premises in which more than 20 people are employed have to be equipped with fire alarms, but these are only to alert the occupants in case of fire. The insurance companies remain to be convinced of the effectiveness of detector systems. This is partly because unlike sprinklers they do nothing to fight the fire at its source and partly because insurance companies are not satisfied about the reliability of these systems, particularly as regards the transmission of the alarm. They are, therefore, prepared to grant only small premium rebates for detector systems. More extensive voluntary use of automatic detector systems appears to be inhibited not only because of the absence of substantial insurance premium rebates but because the technical reliability of present systems has not been fully established and the cost to users of line rentals to fire brigades is high; and on the part of fire brigades because of the difficulties of accommodating the bulky terminal communications equipment in fire stations, the need for frequent testing of communications and the frequency of false alarms. Nevertheless, as we have pointed out in Chapter II, many large fires have developed because of delay in their detection. We feel very strongly that automatic detector systems could be of very great value in reducing the seriousness of fires and the extent of fire losses and that every effort should be made to eliminate the difficulties which we have mentioned.

THE PROPOSED POST OFFICE CARRIER WAVE SIGNALLING SYSTEM

409. The successful development of the new Post Office signalling system, known as "Alarms by Carrier" or "A.B.C.", would go a long way towards making detectors more acceptable. It employs carrier wave techniques to provide channels for the transmission of alarm signals from premises protected by automatic detectors over existing Post Office lines to the local telephone exchange and onwards to a control centre telephone exchange by time-with-frequency multiplexing techniques. Equipment at the control centre exchange identifies the alarm point and causes an identity code to be printed out at the fire brigade control. The system is self-monitoring and electronically tested every three seconds. The terminal equipment at brigade control takes up little space and there is virtually no limit to the number of systems which can be accommodated in each control. The Post Office charges for connecting fire alarms to the A.B.C. system are not yet settled, but it is intended that they shall be independent of distance and cheaper than rented lines of runs exceeding two or three miles. There will be no cost to fire

brigades. We RECOMMEND that every encouragement should be given to the Post Office to complete the development of their carrier wave signalling system and to arrange for it to be installed throughout Great Britain as quickly as possible.

THE CASE FOR AND AGAINST MANDATORY INSTALLATION OF AUTOMATIC DETECTORS AND/OR FIRE-FIGHTING DEVICES

410. In premises such as hospitals, hotels, old people's homes and residential schools a fair number of people die mainly through asphyxiation or poisoning by smoke in fires which break out while they are asleep. Installation of effective detectors in such premises which automatically call the fire brigade would considerably reduce this life risk and we are confident that the present technical and other difficulties associated with detectors will be overcome in the relatively near future. Accordingly we RECOMMEND that serious consideration should be given to making mandatory the installation in such premises of detectors which automatically call the fire brigade.

411. Provision of detectors and/or sprinklers in industrial and commercial premises would not appreciably reduce the life risk, and their compulsory installation would have to be justified on the grounds of the adverse effects of high property losses on the national economy. Losses in these premises currently amount to some £70 million per annum. As shown in Chapter II, the data suggest that probably about half of this loss could be eliminated if there were automatic detectors in premises not in operation round the clock, and sprinklers in buildings in which a fire might start in large accumulations of inflammable material and become virtually uncontrollable before a fire brigade could possibly mount an attack.

412. Requirements under existing fire prevention legislation, directed primarily at the life risk but having a considerable incidental effect on property losses, already increase the cost of industrial and commercial premises by some $2\frac{1}{2}\%$[1], and we feel that any additional requirements must be seen to be justifiable on economic grounds. Although no precise figures are available, it is clear that the cost of installing automatic devices in all or even a large proportion of industrial and commercial premises would be totally out of proportion to the saving in fire losses which might be achieved. Any legislation would necessarily have to be highly selective. We consider that it would be virtually impossible to establish criteria by which specially high risk premises could be identified and to convince occupiers of the justification for mandatory powers. Moreover, we have evidence that a substantial number, amounting probably to about 20%, of occupiers of the larger and higher risk premises have voluntarily installed automatic equipment. In the textile industry this proportion could be as high as two-thirds. We are confident that the increase in reliability and the lower cost of automatic devices which will result from technical development will lead to a substantial extension of this voluntary installation. We consider that encouragement of this approach will be far more effective than the introduction of mandatory measures.

MEASURES TO ENCOURAGE VOLUNTARY INSTALLATION OF AUTOMATIC DEVICES

413. We consider that the proposed enlarged Fire Department of the Home Office should take the lead in co-ordinating work on the future development and

1. Fire Research 1967, published by H.M.S.O.

perfection of alarm systems and in securing the reduction in cost of automatic detector and sprinkler devices, which we believe could be achieved by standardisation of design and by the extension of production runs. Secondly, we consider that if the various non-governmental fire protection organisations could amalgamate, as suggested in Chapter XVII, they should provide facilities to enable them to work out and cost suggested fire prevention schemes for individual industrial and commercial undertakings. We believe that such a service would be welcomed by users as being free from the bias which may be thought to result from the particular vested interests of equipment manufacturers, insurance companies or the fire service. In order to prime the pump for what we are confident will become a self-accelerating process, we RECOMMEND that the provision at least for a time of some financial incentive by government to owners and occupiers to install automatic detector and sprinkler devices should be seriously considered. The principle of providing incentives for measures which are considered to be in the public interest is well established in other areas of public policy, e.g., the encouragement of industrial development by the system of investment grants and of industrial research by allowing capital expenditure on research to be written off in one year for tax purposes.

DOMESTIC FIRE LOSSES

414. The problem of reducing fire losses and fatalities in domestic premises has in no way been affected by the development of automatic detector and fire-fighting systems which we have described in this chapter. But it is in domestic property that the greatest number of fires occurs. As far as we are aware, no worthwhile practical invention to deal with the automatic detection or fighting of fires in domestic premises has been forthcoming. It may well be that work in this field has been set aside because the problem is too diffuse in nature and difficult of definition. Furthermore, the cost of any device would obviously have to be low if it were to gain any acceptance. However, we believe that in this technological age such problems are capable of solution. If, for example, a reliable mass-produced device costing ½% of the capital cost of a domestic house were available, its adoption in new house construction would have a valuable effect on the fire problem over the course of the next few decades. We RECOMMEND that further research should be directed at this important area and that, if and when a suitable device or system is developed, the government of the day should consider statutory measures to ensure its installation in all new housing.

CHAPTER XVI

INSURANCE AND THE FIRE PROBLEM

INTRODUCTION

415. The role of the commercial fire insurance companies in providing a system of mutual sharing of financial fire loss risk is a well established and essential feature of domestic, business and industrial life. In fulfilling this role, the insurance companies have in several ways contributed very significantly to the fight against fire. Their historical contribution to fire-fighting in setting up the first fire brigades is well known. In more recent years, they have concentrated more on encouragement of fire prevention measures by contributing financially to research, by publicity and provision of advice and, most important of all, through their ability to provide economic incentives by gearing fire insurance premiums to the extent to which undertakings adopt fire prevention measures. The commercial insurance companies are also the only source of data on property losses incurred in fires. It is only by analysis of this data that any systematic study can be made of the measures needed to control or reduce such losses in the future.

416. We have concluded elsewhere in this report that the introduction of new legislation directed specifically at reducing property losses in fire is not justifiable. This makes it all the more desirable that the powers of financial persuasion possessed by the insurance industry should be used to the fullest extent, to ensure that fire matters become a much more active concern of many managements and that many more organisations voluntarily adopt physical fire prevention measures. So far, the main premium rebates given by insurance companies for the installation of physical fire prevention systems has been in connection with sprinklers. These have played a very considerable part in the installation of such systems by many industrial and commercial organisations, and, although precise data are not available, it is clear that much property loss in fire has been avoided as a result. Premium rebates for installation of automatic detector devices have been much smaller and have been applied in a much more limited way than for sprinklers, partly because these devices have no fire extinguishing action and partly because their effectiveness in reducing fire loss has not been fully established. We feel, however, particularly in view of the cheaper and more reliable warning transmission systems now in an advanced state of development by the Post Office, that automatic detectors have a most valuable role to play especially in establishments which do not operate on a 24-hour basis. We hope that there will be close liaison between insurance companies, fire authorities and the enlarged Home Office Fire Department and that, as the value of automatic detector systems is more fully established, this will be recognised by appropriate fire premium rebates.

417. We appreciate that to be effective fire prevention systems must be continuously tested and maintained, and that the difficulty of ensuring this is one of the factors which calls for caution on the part of insurance companies in granting rebates. In Chapter XIV we have recommended a strengthening of existing

legislation to make it mandatory for the owner or occupier of any establishment in which more than 10 people work or to which they resort to nominate a senior member of the organisation to be responsible for devising a definite procedure for internal inspection and maintenance of fire prevention measures and for ensuring that this procedure is properly followed. Legally this will apply only to fire prevention measures required under the various Acts and directed primarily at safety of life, but it is hoped that it will be possible for insurance companies to make arrangements with the owners or occupiers of establishments for the inspection and maintenance procedure to be extended to cover voluntary fire prevention measures such as the installation of sprinklers and detectors. It should also be possible with this system to grade establishments according to quality of general housekeeping and managerial efficiency in fire matters and to bring this grading into consideration when fixing premiums.

418. Major fire hazards frequently arise in old buildings, particularly where they are used for purposes different from those for which they were designed. The scrutiny of insurance companies' surveyors and the imposition where necessary of higher premium surcharges can be a valuable supplement to legislative requirements in discouraging or preventing the introduction of hazardous production processes or the storage of inflammable goods in unsuitable buildings. We found that in parts of Switzerland it is impossible to operate unless the buildings are properly insured, and that insurance is refused unless the fire prevention arrangements are approved by the fire police. Because of the free insurance market in this country, we understand that it is usually possible even for "bad risks" to obtain insurance cover. In the main, insurance companies do, however, impose heavy surcharges on bad risks and have in some cases refused to insure the premises. We hope that this kind of pressure to eliminate a relatively small number of very serious fire hazards will continue and will be applied more widely by the insurance industry.

DOMESTIC PREMISES

419. Elsewhere in our report we have referred to the high incidence of fire in domestic premises and to the high proportion of fire fatalities which occurs in them. We recommend in Chapter XVII a very substantial increase in the annual expenditure on fire prevention publicity generally and believe that, in the immediate future, this should be directed particularly towards householders, because in our opinion they are insufficiently conscious of the danger of fire and do less than they should or could to prevent it. We have concluded that legislation requiring fire prevention measures to be taken in private single dwellings would not be practicable; nevertheless, we feel that something more than exhortation and education is needed to encourage in the general public a greater sense of personal responsibility for fire precautions in their own homes. The insurance industry has provided an economic incentive for fire prevention in industry and commerce and it is for consideration whether they could not equally influence domestic losses including loss of life, by devising domestic insurance schemes based on the principle of rewarding the conscientious and penalising the careless. We recognise that considerable difficulties may be involved but we believe that such action, combined with a sustained publicity campaign, may help to bring this problem under control. We RECOMMEND that the insurance companies should give this matter serious consideration.

DATA ON PROPERTY LOSSES IN FIRE

420. We are concerned at the lack of full and accurate statistics relating to fire losses which, in some respects, fall short of the detailed data available in some of the other countries we have visited. The estimate of annual fire losses prepared by the insurance companies is based on the first claim for losses in fires in excess of £10,000, plus assessments of losses in smaller fires and uninsured premises. The estimate is not subsequently corrected to show the total cost of claims actually allowed and no allowance is made in this estimate for consequential losses. Losses in the smaller fires amount in total to a very significant sum but no information is available, for example, on the proportions of these losses which occur in industrial, commercial, public service and domestic buildings. Further, the data at present available do not provide a basis for assessing the effects of various fire prevention measures, such as sprinklers or detectors. We feel that it is in the interests of the community to have much fuller information on all fire losses if these are to be systematically evaluated and fire prevention effort directed to the most relevant ends. We, as a committee, are not in a position to identify all the areas in which more detailed information is required; but we are convinced that, if the enlarged Fire Department of the Home Office is to do its work effectively, it will need much fuller statistical information than is at present available. More detailed information on fire losses can come only through insurance companies or through the owners or occupiers of the premises involved in fire. Its collation from the latter source would be a most complicated and time-consuming operation, whereas the insurance companies have easy means of access to the information, which they require for their own commercial purposes. We appreciate that the insurance industry is a competitive one and that divulging information presents difficulties, but we hope that they will be able to find some way to co-operate closely with the enlarged Fire Department of the Home Office and provide them with the data needed for their investigations. It is for consideration whether this could be facilitated by the Home Office taking enabling powers to require the provision of statistical information on the extent of damage caused by fire in relation to all or any specified type of property or risk.

CHAPTER XVII

PUBLICITY AND EDUCATION

INTRODUCTION

421. In other parts of this report we have referred to statutory fire prevention requirements and the additional measures we propose, and to the encouragement that can be given by reductions in fire insurance premiums to measures that may go beyond statutory requirements in limiting the destructiveness of fire, such as the installation of sprinklers and automatic detectors. It remains true, however, that the best protection, whether in the form of structural fire prevention measures, means of escape, fire-resisting doors, sprinklers or automatic detectors, is useless if the means of escape is obstructed, the doors that should be open are locked and the sprinklers or automatic alarm that should protect the premises when unoccupied are switched off. Even a building of fire-resistant construction can support a fire if inflammable materials introduced for the purposes of industry or commerce are improperly stored or handled, or if inflammable litter is allowed to accumulate. In short, as has been said to us in evidence, *people* cause fires, and national statistics of the sources of ignition show the high proportion of fires started by children playing with matches (nearly one fifth) and by the careless disposal of smoking materials (nearly one tenth). It seems to us undeniable, in the face of these figures, that the main cause of fires, whether one considers major outbreaks in commercial and industrial premises, or the overwhelming majority of outbreaks which occur in private dwellings and outdoors among refuse, is on the one hand a lack of awareness of the danger of fire, and on the other the absence of a proper sense of responsibility for avoiding unnecessary risks. To counter these deficiencies requires in the first place a process of education and in the second the creation of a sense of discipline, supported insofar as this is practicable by incentives and deterrents. Only by an improvement in the attitude to fire among the public at large, managements and work-people can the present steady rise in the incidence of fire be checked. As we have concluded earlier in our report, publicity about the dangers of fire and education in fire prevention are particularly important in relation to fires in domestic premises, since it is not possible to prevent by means of legislation the lack of thought and the irresponsible behaviour which are the cause of so many domestic fires. Before considering further measures to improve the attitude of people to fire risks, we review in the following paragraphs the efforts to provide information and to influence conduct that are already being made.

PRESENT ACTIVITY

422. The Home Departments are guided in these matters by the Information Sub-Committee of the Joint Fire Prevention Committee of the Central Fire Brigades Advisory Councils. Efforts have in the past, as a matter of policy, been directed towards the protection of life from fire—particularly in the home. Publicity directed at the protection of industrial and commercial premises and their contents has been left mainly to insurance interests, whose activities are set out in paragraphs 425 and 426 below. The Home Departments have produced

publicity aids for fire authorities, such as film strips aad promotional literature and, in co-operation with fire authorities, organised national fire prevention campaigns in 1958 and 1965 for which posters, leaflets and other materials were provided. They have produced numerous "filler films" of one or two minutes duration for television showing. These are shown by the British Broadcasting Corporation and independent television companies at their discretion to fill casual gaps between advertised programmes. We understand that a number of projects has been carried out under the auspices of the Information Sub-Committee in an effort to assess the effectiveness of various publicity media. In the autumn of 1967 an experiment was conducted in the City of Leicester in an effort to obtain data about the most effective way of mounting an intensive local campaign, and the effecdveness of various publicity media. The result was disappointing, since a survey after the close of the campaign disclosed no material change in the behaviour of the public and no significant change in the number of fires. It was, however, concluded that a much longer and more costly effort was necessary. Such an effort took place in the Tyne-Tees area in the autumn of 1969, in which commercial television was for the first time used as the principal medium of publicity. The results of this campaign have not yet been assessed. The Home Departments also make an annual grant to the Royal Society for the Prevention of Accidents towards the cost of their propaganda directed to the reduction of the high number of accidents in the home, including outbreaks of fire.

423. Fire authorities, with assistance from the Home Departments, make considerable efforts to increase an awareness of the dangers of fire among the general public. Approaches are also made from time to time by fire brigades to industrial managements. The methods used vary from place to place and include the use of posters, exhibitions, "open days" at fire stations, talks to schools and local organisations and house to house visits by representatives of the brigade. The extent of these activities varies from authority to authority, according to the availability of staff who can effectively present publicity campaigns. The skills required for this purpose are quite different from those which are normally thought of as fitting men to be efficient fire-fighters. It is natural, therefore, that suitable personnel should be more plentiful in some areas than in others. Moreover, staff shortages and the pressure of other work, especially the growing volume of inspection and certification of premises for fire prevention, suggest to us that, even in those areas where efforts are devoted to publicity, it tends to have a comparatively low priority.

424. The efforts of the Home Departments and fire authorities are, as we have already explained, directed mainly to the householder and to the public at large. There are, however, other agencies which contribute to the spread of information about fire risks and address themselves more particularly to one or other selected group. Some of these agencies are voluntary, others are official bodies.

425. The Fire Protection Association was set up in 1946 and is financed largely by insurance companies and Lloyds as an information service for the public as a whole, whether insured or not. Besides the insurance companies and Lloyds, those Government Departments which have specific responsibilities for fire service and fire prevention matters appoint representatives to the Council of the Association, as do also the Confederation of British Industry and the Association of British Chambers of Commerce. The Fire Protection Association caters for industry and

commerce by means of technical information, publicity material, courses for managers and fire prevention handbooks for particular industries drafted in co-operation with the relevant trade associations. It furnishes advice on fire protection to schools of architecture and encourages the teaching of fire prevention to children in schools. To obtain the technical information which it disseminates, the Fire Protection Association maintains close links with the Joint Fire Research Organisation and through the Home Departments with the fire service.

426. The British Insurance Association acts as the central association of British tariff and non-tariff insurance companies covering the whole field of insurance and re-insurance business. Its object is the protection, promotion and advancement of the common interests of those engaged in all classes of insurance business. A few years ago, the Association in collaboration with the Confederation of British Industry, the Chief Fire Officers' Association and the Fire Protection Association set up a network of Regional Fire Liaison Panels. The general aims of these panels (whose activities are co-ordinated by a central panel) are to provide machinery for promoting a better local understanding between the various organisations represented on the panels, to stimulate ideas for local publicity activities, and to settle any local problems which may arise. In our view, the Fire Liaison Panels perform a useful service in bringing together chief fire officers, industrialists and representatives of the insurance interests to exchange ideas on fire prevention, which is a subject of common interest to them all.

427. The Industrial Fire Protection Association has similar aims to the Fire Protection Association, but has a different membership and a different emphasis. The membership consists almost wholly of managers of industrial and commercial premises, and the Association seeks to extend the knowledge of fire precautions among its members by holding regular meetings and training courses and by means of its free technical advisory service. The Association is conscious that its efforts consist largely of preaching to the converted, and it is anxious that managements not yet alive to the gravity of fire risks, who are not members of the Association, should be reached by a strengthened effort on the part of the fire service to establish positive links with industry.

428. The British Fire Services Association is in its origin one of the oldest associations concerned with the extinction of fire, having been formed in 1949 by the amalgamation of two older associations, one dating from 1902 and the other from 1887. About half its membership is drawn from the public fire service and the other half from industrial brigades, brigades at establishments for which Government Departments are responsible, including the Army and Air Force Departments of the Ministry of Defence, and brigades serving railway premises and civil aerodromes. The aims of the Association are to promote uniformity and standardisation of methods, systems and regulations and to encourage the formation of fire prevention and fire-fighting organisations in establishments not at present so protected. It seeks to promote these aims by discussion between its members, by the reading of papers, and by arranging lectures to promote theoretical knowledge and practical application of methods of fire prevention, fire extinction and first aid. The Association claims, because of the cross-section of public and private fire brigades which its membership represents, to be favourably placed for the interchange of information between these two types of organisation and hence for increasing co-operation and understanding. In its evidence to us the Association

suggests that its efforts and those of other fire prevention organisations should be co-ordinated in one central body with recognition by the Government.

429. The Ministry of Agriculture, Fisheries and Food and the Department of Agriculture and Fisheries for Scotland make known the special hazards of farm fires both to farmers and to the general public, especially children. Farm fires do not in the main present hazards to adults, but children have died by playing with matches among bales of hay and straw and also by being caught by the blaze while playing in fields where stubble burning was in progress. The Ministry make use of the press, radio and television for reaching the general public. They have also produced a film, made for them by the Central Office of Information, for showing to audiences of farmers, and have asked the National Farmers' Union to strengthen their code for the guidance of farmers on straw and stubble burning.

430. The Forestry Commission also use the recognised agencies of the press, radio and television for drawing public attention to the serious destruction brought by forest fires, and to the ease with which they can be started if proper care is not taken when picnicking in woodland glades. The Commission also produce and distribute widely leaflets giving information on how to avoid and to attack fire. They communicate direct with those in the immediate neighbourhood of the Commission's forests, and offer the advice and guidance of the Commission's local officers to the owners of the many privately-owned woodlands up and down the country.

THE COST OF PUBLICITY

431. We have referred in Chapter II to the importance of reducing the number of fires, improving the methods of extinction, and limiting the toll of fire in casualties and property. While we recognise the value of the efforts made by the various agencies mentioned in paragraphs 422 to 430, we have considered whether sufficient money is spent on increasing the knowledge and care of the public at large, managements and work people. We attempted, therefore, to obtain information about the scale of expenditure on the efforts made by Government Departments, local fire authorities and the various voluntary organisations referred to in earlier paragraphs. It is not possible to obtain comprehensive figures, but basing our estimate for local authorities' spending on a sample of a few brigades and from figures which the Home Departments and the voluntary organisations gave to us it seems likely that in 1968 the total expenditure of all agencies, both central and local, official and voluntary, was in the neighbourhood of £120,000. The total cost of maintaining the fire service for the same year was approximately £61 million, while direct fire losses were of the order of £100 million. If we are right in thinking that the best method of containing these figures, to say nothing of reducing them, lies in improving fire prevention arrangements and that the best hope of prevention lies in improved public attitudes rather than in more stringent legislation, then an expenditure on publicity of 0·19% of the cost of extinction, or 0·12% of the fire loss, is derisory. We think that substantially increased expenditure on publicity is not only reasonable but highly desirable, and we RECOMMEND that expenditure on fire prevention publicity, particularly by the Home Departments, should be substantially increased. We suggest that a figure of not less than 1% of the cost of the fire service would be a reasonable sum to be spent annually by official bodies.

NEED FOR FURTHER ACTION

432. It is of course essential that maximum benefit should be obtained from this increased expenditure. We welcome the efforts of the Home Departments, described in paragraph 422, to assess the effectiveness of the various publicity media and we RECOMMEND that it should be the continuing duty of the Home Departments to conduct research into the most worthwhile methods of mounting publicity. We commend also the work of the Home Departments in supplying fire authorities with publicity material and advising on publicity campaigns, and we RECOMMEND that this should continue. Earlier in our report we have recommended that the Home Office should act as co-ordinator of the fire prevention activities of Government Departments. We consider that this co-ordinating role should include fire prevention publicity.

433. In reviewing the ways in which publicity can be used to maximum advantage, the various audiences which need to be reached must be identified. There is no doubt that a widespread lack of discipline and irresponsibility on the part of the general public, including the carelessness of some adults and the thoughtlessness and unawareness of danger on the part of children, is the prime cause of many fatalities and much destruction of property. Considerable efforts, as we have already explained, have been made to reach this audience. We wish to emphasise the need for continuing local publicity on these lines and we RECOMMEND that consideration should be given to the use of the local radio stations now coming into existence, in addition to local press publicity.

434. We consider that fire prevention publicity on television is of great importance in supporting local publicity effort. It is through such national publicity that local interest in fire prevention and in the fire brigade can be created. We have already mentioned the "filler films" produced by the Home Departments. Many of them are admirably produced, and bear comparison with the equally good series sponsored by the Ministry of Transport to improve the standard of behaviour on the roads. They are rarely seen, however, as time cannot be bought on British Broadcasting Corporation channels to ensure regular showing and for reasons of expense has not been sought on commercial television. While we recognise that the frequency of their showing by the British Broadcasdng Corporation is a matter for the Corporation, we would welcome their more frequent showing, and we consider also that time should be bought for the purpose on commercial television as was the case in the Tyne-Tees campaign mentioned in paragraph 422. We accordingly RECOMMEND that the Home Departments review the existing arrangements for fire prevention publicity on television, taking into account the results of the Tyne-Tees exercise.

435. The special risks run by children, and the hazards they create for others by their ignorance and natural thoughtlessness, call, we think, for greater efforts than are made at present to educate and interest them. We have been informed of the activities of members of fire brigades in giving talks on fire prevention to youth clubs and to children in school. Nevertheless, there is, we think, less activity of this kind than in the somewhat similar field of road safety, in which local road safety committees set up by local highway authorities co-operate more closely and regularly with schools in securing the interest of children than is the case in respect of fire. We recognise that the time available is limited, and that the freedom of head teachers to determine the curriculum is greatly prized and rightly guarded, but

because of the high proportion of fires caused by children we RECOMMEND that fire brigades should collaborate with education authorities and individual schools to the greatest possible extent to increase the knowledge and affect the conduct of school children in relation to fire hazards.

436. The next audience to be considered consists of the managements of commercial and industrial premises. Although the majority of fire casualties occur in houses and flats, the greatest fire losses in property and consequent economic disruption occur in commercial and industrial buildings. An important contribution to the reduction of these losses can be made by more effective education of managements to provide wider knowledge of the techniques of fire prevention, a greater awareness of the risks involved, and a determination to do everything possible to contain them. Our description in paragraphs 422 to 430 of the various agencies concerned with the dissemination of information about fire prevention shows how much is already being done, and establishes that advice is freely available to any management which feels the need for it and is aware of the agency from which it can be obtained. There is no doubt, however, that many managements, relying on the adequacy of their fire insurance cover, neither feel the need for further precautions nor seek advice on the subject. More than one of the agencies who have given evidence to us have expressed the view that more should be done by the fire service to reach these managements and to establish more positive relations with them. Another anxiety expressed by some agencies has been the need for greater co-ordination between their efforts. Indeed, the Fire Protection Association and the Industrial Fire Protection Association on the one hand, and the Industrial Fire Protection Association and the British Fire Services Association on the other, have had discussions between themselves on the possible amalgamation of their associations, although we understand that no decisions have so far been taken. The inadequacy of the present methods of increasing awareness of the importance of fire prevention and of the role of the fire service has also been commented on by the various staff organisations which have appeared before us.

437. We believe that the unification and strengthening of the voluntary efforts of industrial, commercial and insurance interests provides the best hope of stimulating managements to take a more practical interest in fire prevention. Those of our members who visited the United States of America were greatly impressed by the work undertaken there by the National Fire Protection Association. When first set up about 70 years ago, it received strong support from insurance interests but it is no longer dependent upon them for the bulk of its finances. Today it has more than 20,000 members drawn from industry and commerce. It collects and analyses statistics about fire calls, deaths from fire, property losses, the performance of fire protection equipment, etc. and issues codes of practice on a wide range of fire prevention problems. These codes are frequently adopted by fire departments for statutory purposes. The Association issues publicity material from time to time, is the main source of central guidance on fire matters in North America and issues advice on the organisation and training of industrial fire brigades. In this country some of the work done by the Association is done by central Government, but despite this we are convinced that if a strong national voluntary association on similar lines were set up here it would arouse more enthusiasm among business firms than a purely official body, however well-intentioned and well-informed, could ever hope to do. We accord-

ingly RECOMMEND the setting up of au association, formed by an amalgamation of all the voluntary organisations concerned with fire prevention which, by virtue of its membership and of its contacts with the fire service, would, we hope, become sufficiently knowledgeable to offer to its member firms an advisory service on their individual fire prevention problems which might be more acceptable as coming from a source familiar with their difficulties, financial and otherwise. The executive of the organisation we have in mind should include representatives of industry, commerce, the insurance interests and the fire service. We hope that the Home Departments would be represented by assessors. No one interest should dominate the organisation, which should embrace all existing voluntary fire prevention organisations, and the chairman of the executive should be freely chosen by its members. We RECOMMEND that to stimulate the creation of the new organisation a lead should be given by the Home Departments, and that a substantial annual grant from the Exchequer should form part of the increased expenditure on publicity which we have contemplated in paragraph 431. If, as we believe would happen, the new organisation were to lead to an increased practical concern with fire prevention among a wide range of business managements, the suggested grant would be public money well spent.

438. Another group of people greatly concerned with the risk of casualties from fire are those in charge of residential accommodation, such as hotels, hostels, hospitals, homes for the aged or children's homes. Where these are supervised by bodies with public responsibility to a Government Department or local authority there is usually no lack of general guidance, and the staff of such an establishment frequently includes an officer specifically responsible for advising on fire precautions. In practice, however, his advice may not be acted upon because the hospital management committee, or other managing body, may in times of financial stringency set a low priority on fire precautions, as compared for example with a new operating theatre or some other project more obviously related to the establishment's primary task. Equally, staff shortage or a heavy turnover of staff may lead to insufficient time being found to instruct staff, especially hard-pressed professional staff, in the use of fire-fighting equipment or other necessary elements of fire drill. In Chapter XV we have recommended that in all premises in which more than 10 people work or to which they resort a senior member of the organisation should be directly responsible for ensuring that all fire prevention measures are fully and continuously maintained. This responsibility would cover all aspects of fire prevention, including the effective availability of apparatus, the securing of doors open or closed as the approved scheme might require, the instruction of staff and the holding of fire drills. In residential establishments, a similar clear responsibility should be given to a senior officer and be made known to all the staff, and the managing body of the institution should confer authority on him to require time to be found for efficient staff instruction. This is important, since for example it emerged from the inquiry into the disaster at Shelton Hospital in 1968 that, although the group secretary was responsible for fire precautions, his responsibility was not clearly known to all concerned, and that he had no authority to require the participation of professional staff in fire instruction and drills, if those in direct charge of them decided otherwise. He was thus placed in an impossible position.

439. We turn next to members of the professions directly concerned with the formulation and application of fire prevention requirements in buildings, namely

architects, engineers and building surveyors, whether employed in private practice, in Government Departments, or in the departments of local authorities which deal with applications for the approval of proposals for the erection or modification of buildings. The members of these professions, whether concerned with the preparation of schemes or with their approval, will have a general knowledge, and in many instances a fairly detailed knowledge, of the provisions of current legislation on the subject of fire prevention. In their evidence to us, however, the Royal Institute of British Architects have expressed the view that the principles governing the interpretation by fire brigades of the relevant statutes and regulations should be embodied in published pamphlets available both to the general public and to architects looking for guidance when dealing with specific applications. We share this view, and accept the argument of the Royal Institute that such a practice would reduce the likelihood of different interpretations being given by different authorities. To this end, we have recommended in paragraph 382 the compilation of codes of practice on, for example, means of escape from different types of premises. There is also, we think, room for a better flow of information from the fire service to all these professions about the experience of the performance of various materials and forms of construction which is gained in the course of fire-fighting. This might influence current and future practice in the formulation of schemes. We RECOMMEND that the professional institutions which award qualifications to architects, engineers and surveyors should consider, in collaboration with the Home Departments, whether the syllabuses for the qualifications they confer should require more detailed knowledge of fire prevention than is the practice at present.

440. Finally, there are people who frequent farmlands and woodlands for recreation, and others who, like the farming community, are concerned with rural fire risks in the course of their daily work. Here we recognise the value of the various ways in which the Ministry of Agriculture, Fisheries and Food, the Department of Agriculture and Fisheries for Scotland and the Forestry Commission seek to reach these audiences, as described in paragraphs 429 to 430 above. We have no comment to make on these methods of publicity, except for what we say in paragraph 432 about the co-ordination by the Home Office Fire Department of all attempts to increase the general awareness of fire risks.

THE EFFECTIVENESS OF PUBLICITY—OTHER POSSIBLE METHODS

441. We realise that publicity does not necessarily change attitudes. We hope, however, that an intensified effort to reach the public, including the business manager, the technical student and the school child, over a sustained period following research into the most effective media, will have a significant result in the long term. It must always be remembered that the main need is in the home, and the possibility might well be examined of enlisting the help of social workers, who visit so many homes, to include in their advice some guidance on domestic fire prevention.

CHAPTER XVIII

FIRE RESEARCH

INTRODUCTION

442. No one will dispute that continuous scientific research and technological development work is essential to an effective attack on the problems of fire. For example, it is to this source that the fire service, for fire-fighting purposes, has to look for much needed and diverse developments such as means of locating the main site of a fire in a building, methods for smoke dispersal or the provision of improved extinguishing media for particular types of fire. In the fire prevention field, a full basic understanding of the factors which influence the development and spread of fire in different types of building structures can be obtained only by research. The same applies to the development, for example, of more fire resistant budding and construction materials or of cheaper and more reliable automatic fire detectors and extinguishers and their related communications systems.

443. A great deal of research and development work on fire-fighting and fire prevention has been and will continue to be done by private firms in their own commercial interest, and much relevant scientific knowledge and technological experience will continue to be derived as fall-out from other research in industry, the universities and other institutions. Nevertheless, the needs for research are best known and their priorities best assessed by those bodies directly concerned with implementing the results, for example, the Home Departments and the fire service, which are concerned with the problems of fire-fighting, and fire prevention in buildings once they have been occupied, and the Ministries of Housing and Local Government and Public Building and Works and the Scottish Development Department, which are concerned with those aspects of fire prevention involving building design and construction. We are fully convinced that these bodies should have available to them research facihties specifically devoted to fire problems and financed predominantly from public funds. More open questions discussed in this chapter concern the magnitude of these research provisions, whether they should be concentrated in one organisation, how they should be organised and where they should be iocated.

THE PRESENT POSITION OF FIRE RESEARCH IN THE PUBLIC SECTOR

444. The main agency for fire research in Great Britain is the Fire Research Station of the Joint Fire Research Organisation, which is the responsibility of the Ministry of Technology and is financed partly by the Ministry and partly by the Fire Offices' Committee, an organisation of fire insurance companies. The developments leading to the establishment of the Joint Fire Research Organisation are described in paragraphs 35 to 37.

445. Expenditure by the Fire Research Station in 1968 was £379,000. Of this £57,000 was in connection with work on a repayment basis, leaving a total expenditure of £322,000 on research. A total of nearly 200 persons was employed,

including 69 listed as Fire Research Station staff in the Organisation's Annual Report.[1] Of this latter figure about half had a university degree or an equivalent professional qualification but only 17 including the Director and Assistant Director ranked as a scientific officer or higher.

446. Of the 69 listed staff 14 are engaged in supervisory or administrative duties, general services and work in connection with the library and publications. The remainder are organised into six sections dealing with (*a*) operational research and statistics, (*b*) ignition and growth of fire, (*c*) structural fire protection, (*d*) extinguishing materials and equipment, (*e*) chemistry and chemical engineering and (*f*) special investigations.

447. The Fire Research Station is equipped with physical facilities for research over a wide range of fire problems and for testing the fire resistance of building materials and the effectiveness and reliability of such things as fire detectors and fire-fighting equipment. Testing, some of it of a routine nature, constitutes a very significant part of the Station's activities, the special investigation section being devoted almost entirely to this work. Investigations of a more truly research character are undertaken for Government Departments, for the fire service, for insurance companies and for industry. In addition, the Fire Research Station compdes and publishes the annual United Kingdom Fire Statistics, a statistical analysis derived from reports submitted by fire authorities on all fires attended by local authority fire brigades.

448. The Ministry of Technology is advised on the running of the Station by a small Fire Research Steering Committee, whose members are drawn from the Ministry of Technology, the Home Office, the Fire Offices' Committee and industry. There are also three sub-committees dealing with building regulations, extinguishing materials and equipment and smoke and toxic hazards, which give specialist advice to the Director of the Station and to the Steering Committee. An annual programme of research is prepared by the Director of the Station to include, as far as available facilities permit, investigations requested by government Departments, the insurance companies, the fire service and industry, as well as projects arising from the Station's own work. The programme takes into account the views of the specialist sub-committees and is submitted to the Steering Committee for agreement subject to modifications which it may wish to make. The results of research conducted at the Fire Research Station are made known by the issue of reports directly or through H.M. Stationery Office, by articles in a variety of journals, by lectures and participation in symposia by the Station staff and by answers to specific enquiries. The Fire Research Station is represented on about 100 different committees, including the Central Fire Brigades Advisory Councils, three of their joint committees and a very considerable number of British Standards Institution technical committees and the Building Regulations Advisory Committee.

449. Various research organisations operating under the Ministry of Technology or closely associated with it, although not directly concerned with fire, possess specialised knowledge and experience which make them the most appropriate bodies to give advice and carry out investigatory work on specific fire-fighting or fire protection problems. The Home Office and other Ministries

[1] Fire Research 1968, published by H.M.S.O.

concerned with fire are free to request help from such organisations. Currently, for example, there is an arrangement with the Committee of Directors of Textile Research Associations for a programme of research on the inflammability of wearing fabrics and garments, and the Rubber and Plastics Research Association with a grant from the Ministry of Technology is investigating the inflammability of plastics used in buildings.

450. The Safety in Mines Research Establishment has considerable fire interests, particularly in connection with underground workings with forced ventilation and with fires caused by gas or dust explosions and spontaneous combustion.

451. User trials on new types of fire equipment are sometimes carried out by individual fire brigades and by the Fire Service Technical College, mainly at the request of the Joint Design and Development Committee and the Joint Uniform Committee of the Central Fire Brigades Advisory Councils. At present, however, the Home Departments have no specific power to purchase equipment for research purposes and user trials in brigades, and these are possible only if the fire authority concerned is prepared to provide the necessary finance.

452. Finally, in order to extend operational research facilities, it was found necessary in 1966 to set up a small operational research group in the Home Office Scientific Advisory Branch. This is investigating the factors affecting standards of fire cover and fire service performance, and is evaluating fire losses and determining factors which influence them.

CRITICISMS OF EXISTING FIRE RESEARCH ARRANGEMENTS

453. In their evidence to us, nearly all the bodies dependent mainly on the Joint Fire Research Organisation for research services expressed varying degrees of dissatisfaction with the present arrangements. The main complaints were that insufficient priority and effort were given to the individual practical problems of these bodies, that, relatively, there was too much research of a basic scientific nature and that the reporting of results was too slow and not in the form most suitable for and understandable by the people whose job it is to put the findings to practical use.

454. We fully appreciate that people with little experience of research frequentiy fail to realise that researches, however strongly orientated to practical ends, call, almost inevitably, for a considerable amount of very fundamental work. Nevertheless, we feel that there is a good deal of substance in these criticisms.

455. More facilities and, in particular, more scientific staff than at present possessed by the Fire Research Station will be needed to provide an adequate service to all the bodies responsible for fire-fighting and/or fire prevention. Moreover, we feel that the wide range of duties which is undertaken by the small staff establishment at the Fire Research Station imposes a further limitation on the service which the Station can provide. To a large extent, this spread of too few resources over too great an area of activity stems from the largely independent and isolated nature of the Joint Fire Research Organisation. If fire research were more closely associated with the user departments, the research staff could keep themselves informed about fire matters generally with less effort than at present, the

need for direct representation ou committees would be reduced, the duty of ensuring that research information was distributed effectively and in the most suitable form could be shared and, as a result, there could be much greater concentration on research itself.

456. There are additional reasons to make us feel that the present largely independent position of the Fire Research Station is somewhat unsatisfactory. The purpose of the Station is to provide a research service to bodies concerned with the practicalities of fire-fighting and fire prevention. This calls for the closest association and co-operation between people carrying out the research and those responsible for making practical use of the results and, in our view, the latter should have a considerable and perhaps major say in the direction of the policy, as distinct from the scientific and technical direction of the research activities. One vitally important aspect of policy direction is the selection of research targets and the laying down of research programmes and priorities. In present circumstances, although we are satisfied that the Director of the Fire Research Station and his staff take every opportunity to discuss and take into account the requirements of their clients, the fact remains that even the more important of them, such as the fire service and the Ministries concerned with building matters, are not represented on the Steering Committee which finally determines research programmes, although they have representatives on the three specialist sub-committees. Once programmes are started, the direction of individual research projects has to be based on economic and operational factors as well as on scientific and technological considerations and, again, it is the client body which has the most knowledge and experience of these factors. We emphasise again that this is something which the Director and staff of the Fire Research Station appreciate and that they try to maintain close contact in the course of the research with the body for which it is being carried out. Nevertheless, this is not the same as having an organisation which integrates much more closely research with practical fire-fighting and fire prevention activities.

RECOMMENDATIONS

457. We consider that a radical re-organisation of fire research activities is called for and this view is one of the factors leading to our recommendation that the Fire Department of the Home Office should be enlarged and strengthened to take on new functions to assist in providing better co-ordination of all fire-fighting and fire prevention activities. The following recommendations concerning fire research are made to harmonise with the detailed recommendations for this central body summarised in Chapter IV.

458. While research into the behaviour of fire in different types of building structures, and the development of less inflammable materials of construction and decoration used in the building industry, are of great interest to the fire service, they are to a greater extent the concern of the Ministries of Public Building and Works and of Housing and Local Government, of the Scottish Development Department and of the building industry. Moreover, the fire danger is only one of the many factors which influence building design and construction. There would be a good deal of logic, therefore, in placing policy control of fire research in this field in the hands of people fully conversant with these other factors and in integrating the research and development work itself with that on other building

problems, possibly at the Building Research Station. We RECOMMEND that the building ministries be invited to take over control and execution of research and development on fire prevention problems concerning building design and construction materials.

459. We RECOMMEND that there should be a central fire research station shorn of many of the auxiliary activities carried out within the present Fire Research Station of the Joint Fire Research Organisation. It should concentrate on investigatory work of a true research and development character directed at existing and foreseeable problems of vital practical concern to the fire service, which are not being dealt with adequately by industrial and other organisations. *Inter alia*, such work should include development of new materials and techniques for extinguishing fires, investigations of the many problems of smoke including development of methods for detecting the source of a fire in smoke-filled buildings, and research and development directed towards making available cheaper and more reliable automatic fire detectors and automatic fire extinguishing systems. We RECOMMEND that this central fire research station should be under the administrative and functional control of the proposed enlarged Home Office Fire Department, and that it should be financed by the central Government through the Home Office. There will clearly be a need for some mechanism to ensure the closest co-operation between the Home Office and the building Ministries on fire research as a whole and we refer to this in paragraph 468.

460. We consider that some parts of so-called "testing" work, for example, assessment of new fire extinguishing materials and of new materials for use in building construction and decoration, as well as testing of prototype apparatus and machinery prior to commercial production, are closely related to the research and development effort; and that they should be carried out at the central fire research station or possibly, in the light of what is said in paragraph 458 above, at the Building Research Station. The same applies to research into methods of testing. On the other hand, we feel that the more routine testing of commercial products, the demand for which is increasing and will continue to increase, constitutes an undesirable distraction from research and development problems. We RECOMMEND that this type of work should be undertaken only in very exceptional circumstances alongside work of a more truly research nature and that industry, the insurance companies and others concerned should be invited to make other arrangements, e.g., by the utilisation of commercial testing establishments.

461. We RECOMMEND that the operational research and statistical work now carried out by the Fire Research Station should be combined with the related work now undertaken by the Home Office Scientific Advisory Branch and taken over by the proposed strengthened Home Office Fire Department.

462. We have considered a number of possibilities for the location of these various research activities bearing in mind that none of them is likely to call for a large establishment and that it would be advantageous from a cost standpoint for them to be able to share physical and domestic services with some other activity, rather than to be established on an undeveloped new site.

463. One possibility is:—

(*a*) To turn the present Fire Research Station at Boreham Wood into a laboratory to take all forms of "testing", which are not an essendal part of research and development programmes. This would have the advantage

that this laboratory could then provide a service for industry, the insurance companies and other undertakings. It could remain under the general control of the Ministry of Technology and the financial contribution of the insurance companies and their strong representation on the controlling body could well remain unchanged.

(*b*) To transfer, as recommended in paragraph 459, fire research connected with building design and construction to the Building Research Station and its control to the building Ministries.

(*c*) To set up a new Home Office fire research station on the site of the Fire Service Technical College at Moreton-in-Marsh. This would have the advantage that the site is already under the management of the Home Office, that economies could be made by sharing domestic and physical services with the College and that use could be made periodically of the elaborate fire houses provided primarily for training purposes but which might be suitable for use for special research investigations.

464. Close examination of (*c*) above has led us to the conclusion that the sharing of general physical and domestic services is a far more important factor than the possible use for research purposes of the special fire houses available. In practice, it would be extremely difficult to arrange training and research programmes in such a way that these special facilities could be made available for both purposes when required. A further doubt about (*c*) is whether it is desirable to associate on one site such very different activities as research and training, particularly when, as in this case, training would be the much larger activity. We are not in favour of complete integration of training and research at Moreton-in-Marsh and we consider it would be unsatisfactory for the Director or the Management Board of the College to have any responsibility for the direction or conduct of research. On balance we feel that we cannot recommend the scheme described in paragraph 463 above.

465. An alternative possibility for the location of the various research activities is:—

(*a*) To phase out at the Fire Research Station, Boreham Wood, routine testing which has no reasonably close connection with research. This would mean that arrangements for such testing in industry or elsewhere would have to be made by the industries concerned and the insurance companies.

(*b*) To transfer fire research connected with building design and construction, and testing closely associated with it, to the Building Research Station under the control of the building Ministries, as recommended in paragraph 459.

(*c*) To transfer the site and facilities of the Fire Research Station at Boreham Wood from the Ministry of Technology and the insurance companies to the Home Office, for use exclusively for research and closely associated testing concerned with fire matters which are primarily the interest and responsibility of the Home Departments and the fire service. This would have the advantage that full utilisation would continue to be made of the facilities and services at Boreham Wood, although additions would probably have to be made, and that this type of fire research would be conducted in reasonably close geographical proximity to the Home Office and the Building Research Station at Watford.

We RECOMMEND this scheme provided that control of Boreham Wood is transferred to the Home Office, which we feel to be absolutely essential.

466. Should the transfer of control of the Fire Research Station, Boreham Wood, to the Home Office be unacceptable, our recommendation would be that proposals (*a*) and (*b*) in the scheme described in paragraph 463 should be adopted and a site found for a new Home Office research station other than at Moreton-in-Marsh or Boreham Wood. In order to minimise the capital and operating costs, every effort should be made to choose a site at which basic physical and other services could be shared.

467. We RECOMMEND that the Home Office Fire Department should have powers to augment the work of the proposed new fire research station under their control by arranging research contracts with universities, industry and other organisations which might possess special facilities or knowledge in particular fields. It should also be empowered to arrange for field investigations and user trials of new fire equipment to be carried out by fire brigades with the consent of the fire authorities concerned and at central Government expense.

468. We RECOMMEND also that the Home Office Fire Department in formulating research programmes and priorities should keep itself in close touch with all Government Departments, insurance companies and other organisations with fire research requirements. It should also be responsible for ensuring that there is close liaison between all bodies conducting research bearing on fire matters and that action is taken to fill any important research gaps which might be revealed. It should also be responsible, in consultation with other Ministries concerned, for bringing together the results of research investigations, fireground experience and the findings of operational researches and for disseminating this information to all concerned. We enlarge on this important role in Chapter IV.

NOTE OF DISSENT BY DR. J. W. MACFARLANE

1. With regret I find it necessary to disagree with my colleagues on two matters affecting Scotland and these are contained in:—

(*a*) paragraph 227, Chapter VIII—the Scottish Fire Service Training School at Gullane; and

(*b*) paragraph 293, Chapter IX—the Fire Services (Scotland) Central Examinations Board.

THE SCOTTISH FIRE SERVICE TRAINING SCHOOL, GULLANE

2. The Scottish Fire Service Training School at Gullaue has an experienced staff of 10, in addition to the Commandant and his Deputy, and has provided a high standard of instruction for many years. I believe that it would be a retrograde step if this school were to be "phased out", as my colleagues propose in paragraph 227. Investigations made at the school show that its only real difficulty is the lack of a fire training house. Space for the erection of such a house is available beside the school, and estimates given by senior fire officers indicate that one could be provided for about £10,000, which should surely be within available resources.

3. It has been said in paragraph 202 that the student places at the school are not always fully occupied, but normally the courses for retained men are fully subscribed. In Scotland the need for retained men is particularly acute, especially in the North and West.

4. Travelling to Moreton-in-Marsh is difficult from Scotland because of its geographical position, and men on weekend leave have so little time at home that the journey is scarcely worthwhile. Further, travelling expenses are considerable, especially for men on long courses, who are entitled to travelling and subsistence expenses once every three weeks for the purpose of a visit home.[1]

5. We have recommended that the Staff College at Dorking should be transferred to Moreton-in-Marsh. So far as amenities are concerned there is no need to transfer the Scottish Training School from Gullane to Moreton-in-Marsh.

6. So far as recruit and junior rank training, both of whole-time and retained men, are concerned, I do not believe there will be any enthusiasm from such men to attend at Moreton-in-Marsh. The morale, the fellowship and, perhaps even more important, the locality from which they come and the association with other students of the same type and customs make, in my opinion, the retention of the Training School at Gullane a necessity. I agree that the more advanced courses should be centralised at Moreton-in-Marsh since, by the time a student attends such courses, he is much better qualified to benefit from contact with a wide range of his fellows.

1. National Joint Council for Local Authorities' Fire Brigades, Paragraph 1(c), Circular No. 5/69 of 12th August, 1969.

THE FIRE SERVICES (SCOTLAND) CENTRAL EXAMINATIONS BOARD

7. We refer in paragraph 282 to the fact that the regulations for entry to the Scottish leading fireman's promotion examination are slightly more demanding than those for England and Wales. This is all to the good and no reduction in this standard should be permitted. In paragraph 287, the percentage passes for the sub-officer and station officer examinations in England and Wales and in Scotland are given. It will be noted that the pass rate in Scotland is considerably higher than that in England and Wales.

8. That the Scottish results are so much superior to those for England and Wales cannot be said to be the manifestation of less stringent marking of the examination papers, since the Scottish Examinations Board has an external examiner, who has repeatedly commented on the severity of the marking.

9. As examinations are usually held in a number of centres simultaneously the arguments in paragraph 4 above about travel difficulties do not apply with the same force, but with a Board for Great Britain there would be a tendency to have but one centre for Scotland to the detriment of the entry.

10. Scots law and topography are different from those obtaining in England Wales and, because of this, fireground procedures vary considerably. I do not believe, from experience in other fields, that a London set examination would be satisfactorily applied in Scotland and I am, therefore, convinced that at least for some years to come there must remain a separate Scottish Examinations Board, since to amalgamate the two present Boards could only result in the lowering of the standards in Scotland. It is perhaps worthy of note that the Scottish Board has the greater experience having been established in 1950, while that in England and Wales was formed in 1958.

APPENDIX A

OUR VISITS TO SWITZERLAND, GERMANY, UNITED STATES OF AMERICA AND JAPAN

1. In the autumn of 1968 four of us paid visits to Switzerland and Germany and three of us to the United States of America and Japan. Our object was to meet as many fire officers, fire prevention officials and senior executives of national fire protection organisations as possible in the short time at our disposal and to get a general appreciation of what in other technologically advanced countries were the main problems of fire and the main factors affecting future policy. We wish to record our appreciation of the kindness with which we were received and of the help which was given to us, which we felt reflected the high regard which foreign fire authorities have for the fire-fighting abilities of the British fire service and for the help which they have received from it.

2. It was not our purpose or intention on these visits to go into fire statistics in great detail or into operational procedures of these countries. This would have taken a great deal more time than we had at our disposal, namely three days each in Switzerland and Germany, six days in the United States of America and four days in Japan.

3. Our main impressions from these visits have been referred to in various parts of our Report. They include:—

(*a*) The important part which can be played by insurance companies in persuading industrial and commercial concerns to adopt fire prevention measures.

(*b*) The concern about the rising cost of providing whole-time professional fire brigades and the growing feeling in these countries that the best, and probably the only way, to stem these rising costs was to encourage, by financial incentives if necessary, the maximum implementation of fire prevention measures, particularly automatic detection and automatic extinguishing systems.

(*c*) Carelessness and other personal failings are among the main causes of the rising incidence of fire and of fire losses. Nevertheless, although we could not confirm this by reference to statistics in the countries we visited, we formed the impression that there is less apathy amongst the general public about fire matters than obtains in Great Britain.

(*d*) The importance which is attached, particularly in Japan and Switzerland, to the regular and systematic maintenance of appropriate fire prevention measures in all places where people work or to which they resort, and the measures which are taken to ensure that this is carried out.

APPENDIX B

SECRETARY OF STATE'S POWERS OF CONTROL OF FIRE AUTHORITIES

Relevant Section	Nature of Powers	Comment
Section 2 of the Fire Services Act 1947 as amended by section 2 of the Fire Services Act 1959	(*a*) Making variation or revocation of any reinforcement scheme to be notified to Secretary of State.	
	(*b*) Power to make, vary or revoke a reinforcement scheme and to provide for uniformity of equipment in absence of agreement between the fire authorities and on the request of either.	(*b*) Has not so far been used. Secretary of State may hold public local inquiry if he thinks fit.
Section 5 of the 1947 Act	Voluntary combinations of fire authorities to be subject to Secretary of State's approval.	Does not apply to Scotland.
Section 6 of the 1947 Act	Power to order the combination of two or more fire authorities, provided that no authority with a population over 100,000 may be compulsorily combined with a larger one.	Has not so far been used. Public inquiry required and order to be subject to negative resolution. Does not apply to Scotland.
Section 7 of the 1947 Act as amended by section 3 of the 1959 Act	Appointment of joint committees to be notified to Secretary of State.	Does not apply to Scotland.
Section 12 of the 1947 Act as amended by section 4 of the 1959 Act	Power on request by a fire authority or on Secretary of State's own volition to direct that an arrangement should be entered into between two authorities for one of them to discharge all or any of the functions of the other throughout all or part of its area.	Public local inquiry to be held on request of either authority. Has only been exercised to the extent that the Secretary of State has adjudicated on the apportionment of payments between fire authorities.
Section 14 of the 1947 Act	Power to make regulations for uniformity in fire hydrants and indicating marks.	Central Fire Brigades Advisory Council to be consulted. No regulations made.
Section 17 of the 1947 Act as amended by section 5 of the 1959 Act	Power to make regulations as to the maintenance of discipline and as to appeals against dismissal or disciplinary action.	Regulations to be made on recommendation of, or after reference to, the National Joint Council for Local Authorities' Fire Brigades. Regulations have been made.
Section 18 of the 1947 Act as amended by section 6 of the 1959 Act	Power to make regulations on:— (*a*) the method of appointment of chief officers, and (*b*) the qualifications for appointment to and promotion within brigades and the methods of ascertaining such qualifications.	Central Fire Brigades Advisory Council to be consulted. Regulations have been made. The power under (*a*) has been used to require all appointments of chief officers to be subject to Secretary of State's approval.

Appendix B

Relevant Section	Nature of Powers	Comment
Section 19 of the 1947 Act as amended by section 7 of the 1959 Act	(*a*) Establishment schemes to be notified annually to the Secretary of State. (*b*) Approval of Secretary of State required to variations in establishment involving closure of a fire station or a reduction in whole-time or part-time operational strength or in the number of appliances. (*c*) Power to re-make a fire authority's establishment scheme.	Public local inquiry mandatory for (*c*) and may be held for purposes of (*b*) if Secretary of State sees fit.
Section 21 of the 1947 Act	Power to prescribe by regulations:— (*a*) standards of training, and (*b*) the design or performance of equipment.	Central Fire Brigades Advisory Council to be consulted. No regulations made prescribing general standards. Regulations made for England and Wales prescribing standards for live rescue drills.
Section 22 of the 1947 Act	Power to make arrangements with Treasury approval for the purchase of equipment at the request of a fire authority.	Has not so far been used.
Section 23 of the 1947 Act	Power to establish and maintain:— (*a*) a central training institution and to establish a board for its general direction, and (*b*) one or more local training centres.	(*a*) has been used to establish the Fire Service Colleges and the Scottish Fire Service Training School. (*b*) has not so far been used.
Section 24 of the 1947 Act	Power to appoint inspectors.	See paragraphs 20 and 21.
Section 26 of the 1947 Act as amended by the Fire Services Acts of 1951 and 1959	Power by order to make and vary a Firemen's Pension Scheme.	To be exercised with approval of the Treasury and after consultation with Central Fire Brigades Advisory Council. Scheme made.
Section 29 of the 1947 Act	Requirement to constitute a Central Fire Brigades Advisory Council.	See paragraph 18 and Appendix C.
Section 33 of the 1947 Act	Power to hold public local inquiry into:— (*a*) the manner in which a fire authority is performing its functions under the Act, or (*b*) the circumstances of, or the steps taken to deal with, any outbreak of fire.	Used for the first time in 1969.
Section 36 of the 1947 Act	Power to vary administration schemes in Scotland.	Has only been exercised to the extent that the Secretary of State has adjudicated on the apportionment of payments between contributory fire authorities.

Secretary of State's powers of control of fire authorities

Relevant Section	Nature of Powers	Comment
Section 36 of the 1947 Act	Requirement to constitute separate Central Fire Brigades Advisory Council for Scotland.	See paragraph 18 and Appendix C.
Section 4(1) of the Local Government Act 1966 Section 5(1) of the Local Government (Scotland) Act 1966	Power to reduce rate support grant if a fire authority has failed to achieve or maintain reasonable standards in making provision for fire-fighting purposes, regard being had to the standards maintained in other areas and any standards or requirements imposed by or under any enactment; or (in Scotland only) if the expenditure of a fire authority has been excessive and unreasonable (regard being had to the financial and other relevant circumstances of the area.)	The authority to be given opportunity of making representations and a report, in which the representations are included, to be laid before Parliament and approved by affirmative resolution of the House of Commons. Has not so far been used.
Section 4(2) of the Local Government Act 1966 Section 5(2) of the Local Government (Scotland) Act 1966	Power to make regulations prescribing standards and general requirements for the administration of the fire service.	Subject to negative resolution. Has not so far been used.

APPENDIX C

CENTRAL FIRE BRIGADES ADVISORY COUNCILS

MEMBERSHIP

England and Wales	*Members*	
Home Office	8	
Greater London Council	2	
County Councils Association	6	
Association of Municipal Corporations	6	
Chief Fire Officers' Association	2	
National Association of Fire Officers	8	
Fire Brigades' Union	8	
London Fire Brigade	1	(Chief Fire Officer)
Institution of Fire Engineers	1	
Ministry of Technology	1	(Director of the Fire Research Station)
To represent non-county boronghs	1	
Scotland		
Scottish Home and Health Department	4	
Convention of Royal Burghs	4	
Association of County Councils in Scotland	4	
Counties of Cities Association	4	
Chief Fire Officers' Association	1	
National Association of Fire Officers	5	
Fire Brigades' Union	5	
Institution of Fire Engineers	1	

COMMITTEES OF THE CENTRAL FIRE BRIGADES ADVISORY COUNCILS

Standing Committees

1. *Joint Pensions Committee*

   Terms of reference: to advise the Councils on proposed amendments to the Firemen's Pension Scheme.

2. *Joint Training Committee*

   Terms of reference: to review the training of members of fire brigades.

3. *Joint Committee on Design and Development of Appliances and Equipment*

   Terms of reference: (1) to prepare specifications of suitable appliances to which local authorities should be asked to conform

   (2) to consider problems submitted by the Home Departments or manufacturers as to compliaace with the requirement specifications

(3) to consider other technical problems relating to fire service appliances and equipment which are referred to the Committee by the Home Departments.

4. *Joint Committee on Uniform and Personal Equipment*

Terms of reference: to consider and report from time to time to the Advisory Council upon any question concerning uniform and personal equipment for members of fire brigades except questions affecting supply and conditions of service.

5. *Joint Fire Prevention Committee*

Terms of reference: to consider questions relating to fire prevention as it affects fire brigades.

Ad hoc committees

Ad hoc committees are set up from time to time by the Councils to study particular problems. Examples of such committees in recent years are the Joint Committee on fire-fighting at sea, and the Committee to study fire-fighting techniques in underground buildings.

APPENDIX D

COMPOSITION OF THE FIRE SERVICE COLLEGE BOARD

The Fire Service Colleges are managed by a Board consisting as required by section 23 of the Fire Services Act 1947 of equal numbers of persons appointed by the Secretary of State and of persons representing the interests of fire authorities. The Chairman is appointed by the members from among their number and is invariably the senior Home Office official. The present constitution is as follows:—

Appointments by the Secretary of State	*Members*
Home Office Fire Department	1
H.M. Chief Inspector of Fire Services	1
Scottish Home and Health Department	1
Chief Fire Officers' Association	2
National Association of Fire Officers	1
Fire Brigades' Union	1
Chief Fire Officer, London	1
	8
Appointments by Representatives of Fire Authorities	
County Councils Association	2
Association of Municipal Corporations	2
Greater London Council	1
Scottish local government associations	3
	8
Total membership (including Chairman)	16

The College Board covers England and Wales and Scotland. It is concerned with the management of the Colleges and not the training policy for the fire service generally, which is a matter for the Central Fire Brigades Advisory Councils acting on the recommendations of the Joint Training Committee.

The College Board normally meets about three times a year and is appointed annually to ensure that only persons who have an active interest in the fire service are on the Board.

APPENDIX E

TABULAR STATEMENT OF MAJOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION

Note: (*a*) E.W. indicates that a statute applies only in England and Wales; S. indicates that a statute applies only in Scotland; E.W.S. indicates that a statute applies in England, Wales and Scotland.

(*b*) The following code indicates the Government Department responsible for the administration of each Act:—

H.O.: Home Office
D.E.P.: Department of Employment and Productivity
M.H.L.G: Ministry of Housing and Local Government
S.H.H.D.: Scottish Home and Health Department
S.D.D.: Scottish Development Department

Act	Premises Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Public Health Acts Amendment Act 1890 (E.W.) H.O.	Premises licensed for music and dancing and similar public entertainment	Conditions of licence	Licensing justices	
Cinematograph Acts 1909 and 1952 (E.W.S.) H.O. S.H.H.D.	Premises licensed for the purpose of giving cinematograph exhibitions.	Power to make regulations, extending to fire precautions and the provision of "ample means of safe egress"	County Councils (with power of delegation) and county borough councils	Councils of counties and burghs (except Glasgow and Aberdeen where it is the magistrates)
Burgh Police (Scotland) Act 1892 (S.394-402, as amended by Local Government (Scotland) Act 1947 (S.313) (S.) S.H.H.D.	Theatres and places of public amusement	Conditions of licence		Councils of burghs (other than Aberdeen, Dundee, Edinburgh, Glasgow and Greenock where it is the magistrates). Provisions also adopted by some county councils

Public Health Act 1936 (E.W.) Ss. 59 and 60 H.O. (existing buildings) M.H.L.G. (proposed buildings)	S.59 (*a*) Any theatre, and any hall or other building used as a place of public resort; (*b*) Any restaurant, shop, store or warehouse to which members of the public are admitted and having more than 20 employees; (c) Any registered club; (*d*) Schools, other than local authority schools; (*e*) Any church, chapel or other place of worship (with certain exceptions)	1. Satisfactory means of ingress and egress to be provided. 2. Means of ingress and egress, passages and gangways to be kept free and unobstructed	Building authorities	
	S.60 Any building which exceeds two storeys in height and in which the floor of any upper storey is more than 20 feet above the ground and which:— (*a*) is let in flats or tenements; (*b*) is used as an inn, hotel, boarding house, hospital, nursing home, boarding school, children's home or similar institution; (*c*) is used as a restaurant, shop, store or warehouse and has on any upper floor sleeping accommodation for for persons employed on the premises	To be provided with such means of escape in case of fire as the local authority deem necessary from each storey having a floor more than 20 feet above the ground	Building authorities	

APPENDIX E

TABULAR STATEMENT OF MAJOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Public Health Act 1936 (E.W.) Ss.61-62 as amended and extended by the Public Health Act 1961 (Ss.4-11 and First Schedule) M.H.L.G.	All new buildings, (except those exempted under S.71 of the Act), alterations and extensions to existing buildings, and to existing buildings where there is a material change of use	Power to make regulations regarding *inter alia* the construction of buildings, and the installation of certain fittings, but *not* means of escape in case of fire	Building authorities	
Fire Services Act 1947 S.1(1)(*f*)(E.W.S.) H.O. S.H.H.D	Any building or other property in the area of the fire authority	Power to give advice on request, as to fire prevention measures	Fire authorities	Fire authorities
Building (Scotland) Act 1959 (S.) S.D.D.	All buildings in Scotland, other than those, excluding dwelling houses and offices, belonging to or in the occupation of the U.K. Atomic Energy Authority and those in other classes specifically exempted by the regulations	Requirement to comply with building standards regulations as regards fire precautions (including resistance of structure to the outbreak and spread of fire, the protection of occupants and means of escape in the event of fire)		Building authorities

Factories Act 1961 (E.W.S.) D.E.P.	Sections 40-47 Factories (as defined in section 175 of the Act) where more than 20 persons are employed or 10 above ground floor (10 above first floor, or more than 20 feet above ground if factory built before 1937) or in or under which explosive or highly inflammable materials are stored or used	1. Certification of means of escape in case of fire 2. Means of escape to be properly maintained, and kept free from obstruction	Fire authority* (Factory inspectors in Crown factories). *The power to take proceedings under the Factories Act 1961 rests with H.M. Factory Inspectorate	As for England and Wales
	Sections 48(1)-(6)(10) All factories (with certain exceptions)	Marking and construction of, and access to, means of escape; enclosure of hoistways	H.M. Factory Inspectorate (assisted as required by officers of fire brigades)	As for England and Wales
	Section 48(7)-(9) 52 As for sections 40-47	Provision and testing of fire warnings	H.M. Factory Inspectorate (assisted as required by officers of fire brigades)	As for England and Waies
	Section 49 Factories where more than 20 persons are employed above the first floor or more than 20 feet above ground or in or under which explosive or highly inflammable materials are stored or used	Instructions in use of means of escape	H.M. Factory Inspectorate (assisted as required by officers of fire brigades)	As for England and Wales
	Section 50 As specified in regulations	Power (not yet used) to make regulations regarding prevention of outbreak and spread of fire	H.M. Factory Inspectorate (assisted as required by officers of fire brigades)	As for England and Wales
	Section 51 All factories	Provision of fire-fighting equipment	H.M. Factory Inspectorate (assisted as required by officers of fire brigades)	As for England and Wales

APPENDIX E

TABULAR STATEMENT OF MAJOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Offices, Shops and Railway Premises Act 1963 (E.W.S.) D.E.P.	Offices, shops and railway premises where more than 20 persons are employed or more than 10 above or below the ground floor (or in or under which such explosive or highly inflammable substances as are specified in regulations are stored or used) As specified in regulations All shops, offices and railway premises	1. Certification of means of escape in case of fire 2. Means of escape to be marked, properly maintained and kept free from obstruction 3. Fire warnings to be provided and tested 4. Employees to be made familiar with means of escape Power to make regulations regarding prevention of outbreak and spread of fire:— 1. Provision of fire-fighting equipment 2. Access to means of escape and open air	Fire authorities (Factory Inspectors as regards premises occupied by the Crown, local authorities, and (except for certification of means of escape) offices in factories) (H.M. Inspectors of Mines and Quarries at mines and quarries except for certificate of means of escape)	As for England and Wales
Housing Act 1961 (Section 16) as extended by the Housing Act 1969 (Section 60) (E.W.) M.H.L.G.	Houses in multiple occupation	Provision of such means of escape in case of fire as the local authority consider necessary	Housing authorities	
Housing (Scotland) Act 1966 (Section 107) S.D.D.	Houses in multiple occupation	Provision of such means of escape in case of fire as the local authority consider necessary		Housing authorities

*Licensing Act 1964 (E.W.) H.O.	(*a*) Licensed premises (*b*) Registered clubs	1. Possible conditions of licence 2. Power to object to registration on the ground that, as regards fire risk, the premises are not suitable or convenient	(*a*) Licensing justices (*b*) Magistrates to whom objection is made	(See note below)
Theatres Act 1968 (E.W.S.) H.O. S.H.H.D.	Premises licensed for public performances of plays	Conditions of licence	Counties and county boroughs and the Greater London Council	Councils of counties and burghs
Gaming Act 1968 (E.W.S.) H.O. S.H.H.D.	Commerciai gaming estabhshments, including bingo halls	1. Conditions of licence 2. Fire authorities have a right to be heard on applications for licences and power to inspect premises	Licensing justices	Licensing courts

*Note: There is no specific provision on fire prevention in the Licensing (Scotland) Acts 1959 and 1962 comparable with the provisions in the Licensing Act 1964. However, the licensing courts can have regard to such considerations in deciding whether or not to grant a certificate for licensed premises; and the considerations before the sheriff in an application for the registration of a club include the suitability of the premises, and can therefore embrace fire prevention. Fire authorities, as such, have no powers. But chief constables have a right of objection to applications for certificates of registration; and under administrative arrangements, consult firemasters about whether objections should be lodged on fire prevention grounds.

APPENDIX F

TABULAR STATEMENT OF MINOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION

Note: (*a*) E.W. indicates that a statute applies only in England and Wales; S. indicates that a statute applies only in Scotland; E.W.S. indicates that a statute applies in England, Wales and Scotland.

(*b*) The following code indicates the Government Department responsible for the administration of each Act:

H.O.:	Home Office
M.H.L.G :	Ministry of Housing and Local Government
D.H.S.S.:	Department of Health and Social Security
MIN.TECH.:	Ministry of Technology
D.E.S.:	Department of Education and Science
B/T.:	Board of Trade
S.D.D.:	Scottish Development Department
S.E.D.:	Scottish Education Department
S.H.H.D.:	Scottish Home and Health Department

Act	Premises or Conditions of Transport, etc., Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Explosives Acts 1875 and 1923 (E.W.S.) H.O.	(*a*) Factories and magazines	1. Conditions of licence 2. General rules designed to prevent the introduction into danger, buildings of any substance likely to cause explosion or fire 3. The occupier and persons employed to take all due precautions for prevention of accidents by fire and explosion	H.M. Inspector of Explosives	As for England and Wales (there is no separate Explosives Inspectorate attached to S.H.H D)

(*b*) Stores	1. To be constructed of materials not liable to ignition 2. To be situated at a specified distance from various types of building and other "protected works" 3. General rules designed to prevent the introduction of any substance likely to cause explosion or fire 4. The occupier and persons employed to take all due precautions for prevention of accidents by fire and explosion	County councils; county borough councils; quarter sessions borough councils; created borough councils; district councils to which powers have been delegated by the county council harbour authorities	Councils of counties and burghs (with powers of delegation), harbour authorities
(c) Registered premises	1. Substances and articles of a highly inflammable nature or liable to cause fire or explosion to be kept at a safe distance from any explosive 2. The occupier and persons employed to take all due precautions for prevention of accidents by fire and explosion		
(*d*) Conveyance by road	Power to make byelaws for protecting persons or property from danger		

APPENDIX F

TABULAR STATEMENT OF MINOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises or Conditions of Transport, etc., Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Fabrics (Misdescription) Act 1913 (E.W.S.) B/T.	Textile fabrics	Unlawful to sell, expose or possess for sale any textile fabric, in the piece, made up into garments, or in any other form, to which is attributed, expressly or inferentially, the quality of non-inflammability, or safety from fire: (1) by wording or marking; (2) by verbal representation at time of sale, unless the textile fabric conforms to such standard of non-inflammability as may be prescribed by regulations	London boroughs and common council of City of London: municipal borough and urban district councils	Councils of counties and burghs
Celluloid and Cinematograph Film Act 1922 (E.W.S.) H.O. S.H.H.D.	Premises used for keeping or storing of (i) raw celluloid (*a*) in quantities exceeding 1 cwt. or (*b*) in smaller quantities unless kept in properly closed metal box or case; (ii) cinematograph film (containing celluloid) (*a*) in quantities exceeding 20 reels or 80 lb. in weight, or in	1. To be provided with such means of escape as the local authority may reasonably require; to be maintained in good condition and free from obstruction 2. Premises cannot be used where they are so situated that a fire might interfere with means of escape from the building and adjoining building or if	All councils except county councils	Councils of counties and burghs (except Glasgow)

	(*b*) smaller quantities (as in (*i*) above) N.B. The Act does not apply to premises licensed under the Cinematograph Act 1909	situated under residential premises 3. Premises cannot be used where they form part of a building unless they are (i) separated from any other part of the building by fire-resisting partitions and fire-resisting self-closing doors; (ii) so situated and constructed that a fire therein is not likely to spread to other parts of the building . . . 4. Regulations set out in first Schedule to the Act to be observed		
Home Counties (Music and Dancing) Licensing Act 1926 H.O.	Premises licensed for music and dancing, etc. Originally applied to premises within 20 miles of the City of London or Westminster whichever is the nearer. Subsequently applied by local Acts to other areas	Conditions of licence	County and county borough councils	
Petroleum (Consolidation) Act 1928 (E.W.S.) H.O. S.H.H.D.	Premises licensed for keeping petroleum spirit (Section 2) Transport of petroleum spirit (Section 6)	Conditions of licence Power to make regulations for protection of persons or property from danger	County borough and district councils and harbour authorities	Councils of counties and burghs; harbour authorities
Children's and Young Persons (Scotland) Act 1937 (S.) S.E.D.	Approved schools Remand homes	General powers		

APPENDIX F

TABULAR STATEMENT OF MINOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises or Conditions of Transport, etc., Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Education Act 1944 (E.W.) D.E.S.	(*a*) Schools and special schools maintained by local education authorities	(*a*) Buildings to conform to standards specified in regulations	(*a*) Local Education Authorities (Counties and county boroughs	
	(*b*) Direct-grant schools and other grant-aided establishments	(*b*) Power to make regulations stating conditions under which grants are payable	(*b*) D.E.S.	
	(*c*) Independent schools	(*c*) Final registration subject *inter alia* to satisfactory fire precautions	(*c*) D.E.S.	
Children Act 1948 (E.W.) H.O.	Local authority children's homes and voluntary children's homes	Power to make regulations as to conduct of homes and for securing welfare of children	County and county borough councils	
National Assistance Act 1948 Section 40 (E.W.) Mental Health Act 1959, Section 19 (E.W.) Nursing Homes Act 1963 (E.W.) D.H.S.S.	(i) Disabled persons homes; (ii) Old persons homes; (iii) Residential homes for mentally disordered persons; (iv) Mental nursing homes; (*v*) Nursing homes	Power to make regulations to require the managers to take adequate precautions against the risk of fire	Registration authorities, i.e., county and county borough councils	

Nurseries and Child-Minders Regulations Act 1948 (E.W.S.) D.H.H.S. S.E.D.	Premises other than premises wholly or mainly used as private dwellings, where children are received to be looked after for the day or a substantial part thereof or for any longer period not exceeding six days; Persons who for reward receive into their homes children under the age of five to be looked after as aforesaid	Premises to be fit for the purpose Power to inspect at all reasonable times (any person authorised by local health authority)	Local health authorities	Local authorities
Pet Animals Act 1951 (E.W.S.) H.O. S.H.H.D.	Pet shops	Local authority to have regard to need for securing . . . that appropriate steps will be taken in case of fire or other emergency Local authority may authorise any of its officers or any veterinary surgeon or practitioner to inspect	Councils of county boroughs, county districts and common council of City of London	Councils of counties and burghs
Caravan Sites and Control of Development Act 1960 (E.W.S. except Part 2) M.H.L.G. S.D.D.	Caravan sites	Conditions of licence	Non-county borough councils, urban and rural district councils	Councils of counties and burghs
Consumer Protection Act 1961 (E.W.S.) H.O. S.H.H.D.	Any prescribed class of goods	Power to make regulations prescribing, for any class of consumer goods, any requirements considered expedient to prevent risk of death or personal injury	Such of the following as may be specified in the regulations: councils of counties, county boroughs, county districts and the London boroughs and the Common Council of the City of London	Councils of counties and burghs as specified in the regulations

APPENDIX F

TABULAR STATEMENT OF MINOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises or Conditions of Transport, etc., Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Education (Scotland) Act 1962 (S.) S.E.D.	(*a*) Schools and Special Schools managed by education authorities (*b*) Grant-aided schools and other grant-aided educational establishments (*c*) Independent schools	(*a*) Buildings to conform to standard specified in regulations* (*b*) Buildings to conform to standards specified in regulations* (*c*) Final registration subject *inter alia* to satisfactory fire precautions		(*a*) Education Authorities (*b*) S.E.D. (*c*) S.E.D.
Pipe-lines Act 1962 (E.W.S.) MIN.TECH.	(*a*) Cross-country pipelines (i.e. lines exceeding 10 miles in length) (*b*) Local pipe-lines	1. Cross-country pipelines not to be constructed without Minister's authority 2. Local pipe-lines not to be constructed without notice to the Minister 3. Power to make regulations for securing safety during construction, operation and maintenance of pipe-lines 4. Duty of owner to make arrangements whereby in the event of escape or ignition of product carried, fire brigade is notified	Ministry of Technology (Pipe-lines Inspectorate)	As for England and Wales

Animal Boarding Establishments Acts 1963 (E.W.S.) H.O. S.H.H.D.	Boarding establishments for animals	Appropriate steps to be taken for the protection of the animals in case of fire or other emergency Local authority may authorise any of its officers or any veterinary surgeon or practitioner to inspect	Councils of county boroughs, county districts, London boroughs and common council of City of London	Councils of counties and burghs
Betting, Gaming and Lotteries Act 1963 (E.W.S.) H.O. S.H.H.D.	Betting shops, etc.	Premises to be fit for the purpose	Licensing justices	Licensing courts
Riding Establishments Act 1964 (E.W.S.) H.O. S.H.H.D.	Riding establishments	Appropriate steps to be taken for the protection of horses in the event of fire Local authority may authorise any of its officers, officer of any other local authority or veterinary surgeon or practitioner to inspect	Councils of county boroughs, London boroughs, common council of City of London, non-county boroughs or urban districts with population of 20,000 upwards, as respect any other area the county council	Councils of counties and burghs
The Private Places of Entertainment (Licensing) Act 1967 (E.W.) H.O.	Premises used for music and dancing or similar entertainment which are not public and which are promoted for private gain (other than when the entertainment which are not public and which are types of society in order to benefit the society as a whole)	Conditions of licence	Local authorities and licensing justices (viz.) the enforcing authorities for existing law relating to music and dancing in premises used for public entertainment	

* The regulations prescribe general requirements and standards only.
The School Premises (General Requirements and Standards) (Scotland) Regulations 1967 do not contain any reference to structural requirements in respect of fire. These are set out in the Building Standards (Scotland) Regulations 1963 which are administered by S.D.D.

TABULAR STATEMENT OF MINOR STATUTORY PROVISIONS RELATING TO FIRE PREVENTION (continued)

Act	Premises Affected	Scope of Provisions	Enforcing Authorities	
			England and Wales	Scotland
Social Work (Scotland) Act 1968 (S.) S.E.D.	All residential and other establishments (e.g. day centres) providing social welfare facilities for children, old people or persons who are physically or mentally handicapped	Power to make regulations as to control of residential and other establishments		Councils of counties and large burghs

APPENDIX G

GOVERNMENT DEPARTMENTS OTHER THAN THE HOME OFFICE WITH AN INTEREST IN FIRE PREVENTION

1. **Ministry of Agriculture, Fisheries and Food**

The Ministry has a general concern for safe farming practices. The Forestry Commission (which operates independently of the Ministry) has its own specialist officers on fire prevention in forests and woodlands.

2. **Ministry of Defence**

(*a*) *Air Force Department*
Fire prevention and control and the administration and training of R.A.F. and civilian personnel employed on these duties. Development and maintenance of fire equipment, fire appliances and fire prevention and control techniques on R.A.F. stations and installations.

(*b*) *Army Department*
At present there are two fire services run by the Army Department. The Army Fire Service, responsible to the Quarter-Master-General, deals with fire prevention, fire precautions and inspection of all units/bases/installations world-wide; provision and control of fire vehicles and equipment for use under field and static conditions, advice on fire protection of armoured and fighting vehicles and military manned ships. The Directorate of Safety, responsible to the Master-General of the Ordnance, deals with Royal Ordnance Factories, Research and Development Establishments, etc., and gives technical advice on all aspects of fire prevention and protection, with emphasis on special risks associated with Defence equipment and installations. The control of these two fire services under a single organisation and a higher degree of integration and standardisation, are at present under consideration.

(*c*) *Navy Department*
Fire prevention and fire-fighting arrangements in all Naval Establishments and H.M. ships.

3. **Department of Education and Science**

The direct responsibility for fire precautions in schools and other establishments maintained by a local education authority lies with that authority. In independent schools the responsibility lies with the proprietor. Regulations made by the Secretary of State lay down general requirements for maintained and grant-aided educational establishments (other than universities) which include provision for the safety of the occupants in the event of fire, and the Department has issued more specific guidance on this aspect of the design, construction and use of buildings. Fire precautions are also a matter which might concern H.M. Inspectors of Schools in their visits. The Department arranges for independent schools to be inspected by representatives of the fire authority, either when they apply for registration as new schools, or when H.M. Inspector of Schools on a visit to an already registered school considers that fire precautions have been neglected.

Once the fire authority has reported, the Secretary of State uses his powers under the Education Act 1944 to ensure that the proprietor applies the recommendations to the satisfaction of the fire authority.

4. Department of Employment and Productivity

The Department is responsible for the Factories Act 1961 and the Offices, Shops and Railway Premises Act 1963. H.M. Factory Inspectorate is directly responsible for the enforcement of the fire provisions of the Act of 1961 (except as regards duties entrusted to fire authorities in relation to means of escape provisions) and enforces all the fire provisions of both Acts in Government and local authority premises.

5. Department of Health and Social Security

The Department has a general concern with safety in hospitals (though the direct responsibility for fire precautions in particular premises lies with the local Management Committee). In this connection, the Department has issued publications on hospital design (incorporating sections on fire precautions) and on fire precautions in hospitals. The Department is also responsible for the National Assistance Act 1948 and the Nursing Homes Act 1963, under which Acts Regulations have been made requiring adequate fire precautions in Nursing Homes, Old and Disabled Persons' Homes and Homes for Mentally Disordered Persons. These Regulations are enforced by the local authority as the registration authority for these types of premises.

6. Ministry of Housing and Local Government

The Ministry is responsible for the Building Regulations made under the Public Health Acts, and for fire prevention measures which may be required under sections 59 and 60 of the Public Health Act 1936 in new and altered buildings. It is also responsible for the Housing Acts 1961 and 1969, under which means of escape in case of fire can be required in houses in multiple occupation.

7. Ministry of Public Building and Works

The Ministry is responsible for structural fire protection and prevention in all Government buildings for which it has management responsibilities, and is similarly jointly responsible with other property-owning Departments in the buildings it erects and maintains for them. The Ministry also supplies fire-fighting equipment and gives general fire precautions guidance to the Departments occupying its buildings. It has for many years employed its own fire specialists. The Ministry is also responsible for the Building Research Station, and is the sponsoring Department for the construction industry; as such it is concerned with fire prevention measures involved in construction problems. The Ministry is also responsible for the Agrément Board which assesses new building products and components.

8. Ministry of Technology

The Ministry is the Department responsible for the Joint Fire Research Organisation and has wide responsibilities for fire prevention in the fuel and power industries. These responsibilities are largely exercised through the Mines Inspectorate, the Inspectorate of Nuclear Installations, the Electricity Engineering Inspectorate and the Pipe-Lines Inspectorate.

9. **Ministry of Transport**

The Ministry has an interest in fire protection installations in harbours, docks and piers. It is also responsible for the Public Service Vehicles (Equipment and Use) Regulations 1958, which provide for the provision of fire extinguishers in public service vehicles.

10. Board of Trade

The Department is responsible for the Merchant Shipping Rules 1965, made under the Merchant Shipping Act 1964, which, *inter alia*, deal with fire prevention and fire-fighting in passenger ships and cargo ships in accordance with standards laid down by international agreement. The Department also has certain responsibilities in relation to the provision of fire cover at civilian airports.

11. Department of Agriculture and Fisheries for Scotland

The Department's responsibilities in Scotland are similar to those of the Ministry of Agriculture, Fisheries and Food in England and Wales (see paragraph 1).

12. **Scottish Development Department**

The Department is responsible for the Building (Scotland) Act 1959 and the Building Standards (Scotland) Regulations 1963 made thereunder. It is also responsible for the Housing (Scotland) Act 1966 (Section 107 of which deals with the provision of means of escape in cases of fire from houses in multiple occupation).

13. Scottish Education Department

The direct responsibility for fire precautions in schools and other establishments maintained by a local education authority lies with that authority. In independent schools and grant-aided schools and education establishments the responsibility lies with the proprietor. Regulations made by the Secretary of State for Scotland lay down general requirements for public schools (i.e. schools managed by education authorities) and grant-aided educational establishments (other than universities), but these do not include provision for the safety of the occupants in the event of fire. Structural requirements in respect of fire precautions are laid down in the Building Standards (Scotland) Regulations 1963. Fire precautions are also a matter of concern to H.M. Inspectors of Schools in their visits. Independent schools must be registered; before such registration can be made final the proprietor must inform the Department that he has consulted the local fire service about fire precautions and has put into effect any recommendations made. If H.M. Inspector of Schools, on a visit at any time, subsequently feels that fire precautions have been neglected, the Department may seek an up-to-date report from the fire service and will satisfy themselves that any recommendations are put into effect.

14. Scottish Home and Health Department

The Department exercises direct responsibility for the fire service in Scotland in the same way as the Home Office for England and Wales. The administrative arrangements in the Scottish Home and Health Department for fire prevention matters differ in some respects from those in the Home Office, in that various divisions are responsible for consumer protection, home safety and matters dealt with by the Department of Health and Social Security in England and Wales.

15. **Welsh Office**

The responsibilities set out in paragraph 6 are exercised in Wales by the Welsh Office.

APPENDIX H

LIST OF WITNESSES

Written evidence was submitted to us by the following:—

GOVERNMENT DEPARTMENTS

Board of Trade
Department of Education and Science
Department of Employment and Productivity*
Department of Health and Social Security
Forestry Commission
Home Office*
Ministry of Agriculture, Fisheries and Food
Ministry of Defence (Navy, Army and Air Departments)
Ministry of Housing and Local Government*
Ministry of Public Building and Works
Scottish Development Department
Scottish Home and Health Department*
Ministry of Technology

LOCAL AUTHORITY ASSOCIATIONS

Association of County Councils in Scotland*
Association of Municipal Corporations*
Convention of Royal Burghs
Counties of Cities in Scotland
County Councils Association*

LOCAL AUTHORITIES

Bedfordshire County Council
City of Coventry Council*
Flintshire County Council
Greater London Council*
Borough of Yeovil

STAFF ORGANISATIONS

Chief Fire Officers' Association*
Fire Brigades Union*
National Association of Fire Officers*
National and Local Government Officers' Association*

FIRE BRIGADES

City of Exeter fire brigade
City of Coventry fire brigade

* Also gave oral evidence.

Appendix H

OTHER ORGANISATIONS

British Fire Services Association*
British Insurance Association*
British Plastics Federation
British Standards Institution
Cement and Concrete Association
Central Electricity Generating Board
Central Fire Liaison Panel
Concrete Society
Confederation of British Industry*
Dennis Bros. Ltd.
District Surveyors Association
Electricity Council
Fibre Building Board Development Organisation Ltd.
Fire Protection Association*
Fire Research and Training Trust
Fire Research Station
Fire Services Central Examinations Board
Fire Services (Scotland) Examinations Board
Greater London Building Surveyors' Association
Incorporated Association of Architects and Surveyors*
Industrial Fire Protection Association*
Institution of Fire Engineers*
Institution of Heating and Ventilating Engineers
Institution of Structural Engineers
A. G. McBain and Co.
Mather and Piatt Ltd.
Merryweather and Sons Ltd.
Midlands Fire Liaison Panel
National Joint Council for Local Authorities' Fire Brigades*
E. Pollard and Co. Ltd.
Royal Institute of British Architects
Royal Institution of Chartered Surveyors
Security and Fire Alarms Systems Association Ltd.
Scottish Trades Union Congress
Timber Research and Development Corporation
Trades Union Congress

INDIVIDUALS

Mr. N. Bentley*
Mr. D. Blacktop, O.B.E.
Mr. F. O. Butler-Fleming
Mr. J. M. Caygill
Mr. J. Cook
Sir Frederick Delve, C.B.E., K.P.F.S.M.
Lt. Commander J. H. Fordham, R.N. (retired), C.B.E., Q.F.S.M. (deceased)*
Mr. G. E. Garrett*
Mr. W. E. J. Griffin

* Also gave oral evidence.

INDIVIDUALS (CONTD.)

Mr. J. Hartil, Q.F.S.M.
Mr. R. Ingham
Mr. M. Keulemans
Mr. D. I. Lawson*
Mr. E. W. Macintyre
Mr. A. W. Port
Mr. H. J. P. Priest
Mr. N. F. Richards, M.B.E., Q.F.S.M.
Mr. F. Rushbrook, C.B.E.
Mr. P. J. Swan
Mr. F. Taylor, C.B.E., Q.F.S.M.
Mr. J. Walters
Mr. A. E. Webb

The following gave oral evidence:—

GOVERNMENT DEPARTMENTS

DEPARTMENT OF EMPLOYMENT AND PRODUCTIVITY

Mr. B. H. Harvey
Mr. F. J. Kirk
Mr. J. Nixon
Mr. C. H. Sisson

HOME OFFICE

Mr. E. Benn
Mr. G. H. McConnell, C.B.
Mr. J. McIntyre
Mr. F. H. Pavry
Mr. G. P. Renton
Mr. I. Roy
Mr. H. M. Smith, C.B.E.
Mr. A. V. Thomas, O.B.E., G.M.

MINISTRY OF HOUSING AND LOCAL GOVERNMENT

Mr. O. H. Lawn
Mr. J. R. Niven
Mr. C. J. Pearce

SCOTTISH HOME AND HEALTH DEPARTMENT

Mr. W. Hutchison
Mr. R. E. C. Johnson, C.B.
Mr. J. D. McNicol, O.B.E. (deceased)

LOCAL AUTHORITY ASSOCIATIONS

ASSOCIATION OF COUNTY COUNCILS IN SCOTLAND

Mr. F. Inglis, C.B.E.
Mr. I. V. Paterson
Mr. J. Stewart, Q.F.S.M.

Appendix H

ASSOCIATION OF MUNICIPAL CORPORATIONS

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Mr. W. O. Dodd
Mr. E. T. Hayward, O.B.E., K.P.F.S.M.
Alderman T. G. John, J.P.
Mr. F. G. Jones
Alderman A. E. McVie, C.B.E., J.P.
Mr. K. B. Moore
Mr. G. C. E. Snowling
Mr. J. C. Swaffield

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Mr. J. R. Buckenham, M.B.E.
Mr. A. C. Hetherington, M.B.E.
Mr. R. John, C.B.E.
Mr. G. Matthews
Mr. J. H. Moore, O.B.E. (deceased)
Mr. H. E. R. Peers, O.B.E. (deceased)
Mr. J. B. Vickery, O.B.E.
Alderman E. F. Winser, C.B.E., M.C., D.L.

STAFF ORGANISATIONS

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Mr. C. N. Bidgood, O.B.E.
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Mr. G. Eastham, O.B.E., Q.F.S.M.
Mr. H. F. Griffiths, O.B.E.
Mr. J. Stewart, Q.F.S.M.

FIRE BRIGADES UNION

Mr. W. Barber
Mr. T. Bennett
Mr. A. Breeze
Mr. J. Dean
Mr. T. E. Harris
Mr. R. K. Head
Mr. E. Humphries
Mr. R. Kilburn
Mr. T. Parry, O.B.E.

NATIONAL ASSOCIATION OF FIRE OFFICERS

Mr. R. H. Bishop
Mr. J. Camp, M.B.E.
Mr. C. R. Chandler
Mr. W. R. J. Hitchin
Mr. J. Houghton
Mr. T. Kirkbride
Mr. N. G. Perry

NATIONAL AND LOCAL GOVERNMENT OFFICERS' ASSOCIATION

Mr. W. C. Anderson, C.B.E.
Mr. G. Newman

FIRE AUTHORITIES

CITY OF COVENTRY

Mr. A. J. Archer
Mr. R. W. Hinton
Mr. M. Jones
Mr. A. Leese, Q.F.S.M.
Mr. K. Rose
Mr. B. Rossiter

GREATER LONDON COUNCIL

Mr. W. L. Hooper
Mr. L. W. Leete, C.B.E.
Mr. R. Mitchell
Mr. E. W. Parker, O.B.E.
Mr. H. Smith
Mr. W. J. Smith

OTHER ORGANISATIONS

BRITISH FIRE SERVICES ASSOCIATION

Mr. W. H. L. Brogden
Mr. J. Crowther, M.B.E.
Mr. A. Leese, Q.F.S.M.
Commander A. C. Pitman, R.N. (retired)

BRITISH INSURANCE ASSOCIATION

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Mr. R. H. French
Mr. J. R. Grey
Mr. A. A. Maclaren
Mr. E. E. Palmer
Mr. J. Robertson
Mr. R. V. Seels
Mr. W. G. Watson
Mr. R. T. D. Wilmot

CONFEDERATION OF BRITISH INDUSTRY

Mr. H. Mason Bibby
Sir Stephen Brown, K.B.E.
Sir Frederick Delve, C.B.E., K.P.F.S.M.
Mr. R. F. Eberlie
Mr. E. M. Felgate

FIRE PROTECTION ASSOCIATION

Mr. J. R. Harker
Mr. N. C. Strother Smith
Dr. H. D. Taylor
Mr. C. D. Woodward

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FIRE RESEARCH STATION

Mr. J. Fry
Mr. D. I. Lawson

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS

Mr. F. Didsbury, M.M.
Mr. I. Riley
Mr. H. P. Stone

INDUSTRIAL FIRE PROTECTION ASSOCIATION

Sir James Bowker, G.B.E., K.C.M.G.
Mr. W. K. Hall, O.B.E.
Mr. K. J. Hill
Mr. J. P. Ridley
Mr. J. A. T. Sim

INSTITUTION OF FIRE ENGINEERS

Mr. E. R. Ashill, O.B.E.
Mr. D. Blacktop, O.B.E.
Mr. N. F. Richards, M.B.E., Q.F.S.M.
Mr. F. Rushbrook, C.B.E.
Mr. A. P. L. Sullivan, C.B.E., M.M., K.P.F.S.M.
Mr. A. Warren, O.B.E.

NATIONAL JOINT COUNCIL FOR LOCAL AUTHORITIES' FIRE BRIGADES—EMPLOYERS' SIDE

Mr. A. E. Coventon
Mr. R. E. Griffiths, C.B.E.
Mr. L. W. T. Leete, C.B.E.
Mr. A. Masson, O.B.E.
Mr. M. E. McIneruey
Alderman A. E. McVie, C.B.E., J.P.
Mr. H. E. R. Peers, O.B.E. (deceased)
Mr. G. M. Soutar
Mr. J. B. Vickery, O.B.E.

INDIVIDUALS

Mr. N. Bentley
Lt. Cmdr. J. H. Fordham, R.N. (retired), C.B.E., Q.F.S.M. (deceased)
Mr. G. E. Garrett

Printed in England for HER MAJESTY'S STATIONERY OFFICE
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