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Author(s): Wyn Grant

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THE PROVISION OF FIRE SERVICES IN RURAL AREAS

Wyn Grant, Professor of Politics.

Department of Politics and International Studies

University of Warwick

Coventry CV4 7AL

Abstract

The closed system of policy-making in relation to fire services has been disrupted by a number of events. A new emphasis has been placed on saving lives rather than defending property but meeting this objective poses problems in rural areas. Documents from the National Archives are used to examine early central government attempts to stimulate fire service provision in rural areas. Rates of death from fire are influenced by attendance times and are particularly high in remote rural areas. Rural provision of fire cover was treated as a residual category and there were no standards set for remote rural areas. Social changes in rural areas have made it more difficult to secure sufficient numbers of retained fire fighters. It has proved particularly difficult to provide an adequate service in remote rural areas such as the Highlands and Islands of Scotland, despite recent policy initiatives there. Problems of providing fire cover are particularly acute on isolated islands. It is too early to say whether the shift away from fire cover rules to an integrated risk management approach will improve rural provision. Fire services in rural areas have been a marginal issue in the analysis of fire policy and a peripheral subject in rural studies.

For a long time the provision of fire services was generally not very politically salient (Davis and Norton, 1992, p. 58). There were a number of reasons for this including generally high levels of satisfaction with the service provided and the technical nature of the issues involved. Fire policy issues were discussed within a relatively closed policy community in which the principal actors were the Home Office, the local authorities and the Fire Brigades Union. This closed policy-making system was disturbed by the Bain review of the future of the fire service, the subsequent strikes over the proposals for modernisation and the protracted negotiations that were required before a final policy settlement was reached. The shift of responsibility away from the Home Office, ultimately to the Office of the Deputy Prime Minister, also created an environment in which change to existing practices was possible.

An important part of the change in fire service priorities has been the shift from a deeply embedded historical emphasis on protecting property to saving lives. However, this policy shift faces particular problems in rural areas. There is evidence to suggest that rates of death from fire in remote rural areas are higher than the national average. For example, in the Scottish Highlands and Islands, 'The rate of fire death in sparsely populated areas needs to be reduced by at least 60% for it to fall to the UK average.' (Entec, 1999, p.iv). There are also some special kinds of fire risk that are most usually encountered in rural areas. Because of social changes in rural areas it is becoming more difficult to staff 'retained' (part-time) fire brigades that are the most usual way of providing fire cover. This article surveys both the historical development of fire services in rural areas and the contemporary policy problems and potential solutions. Historical analysis is important because the provision of fire cover has taken a highly 'path

dependent' form with decisions taken in the period immediately before and during the Second World War shaping the form of the service for the following sixty years.

The development of rural fire cover

Britain had inadequate fire fighting provision by international standards for much of the late 19th and early 20th century, but the position was even worse in most rural areas. In some localities magnates might maintain elaborately equipped and immaculately turned out brigades of their own and, although their principal purpose was to safeguard the properties owned by the landowner concerned, they might be made available to fight other fires in the locality. Such 'prestige' brigades did not, however, provide anything approaching a comprehensive system of cover and even where they existed their deployment was at the whim of the landowner concerned for whom fire fighting was often a hobby. There was a general perception that fires in the countryside were less serious as they were less likely to lead to a conflagration, i.e., a fire that spread rapidly from one building to another.

When the Royal Commission on Fire Brigades and Fire Prevention reported in 1923 its view seemed to be that there was little that could be done to protect some rural areas. 'There are certain parts of the country which it would be uneconomic to protect, such as the hilly areas of Cumberland and Westmorland, the Cotswold range of hills in Gloucester, or some of the mountainous districts in Wales and the Highlands of Scotland.' (Royal Commission, 1923, p.140). The Home Office, and in particular one civil servant with responsibilities in the area, (Sir) Arthur Dixon, who played a key role in shaping the development of fire service provision, were keen to improve the provision of fire services, not least in rural areas. However, in a time of severe restraint on public

expenditure, it was not possible to obtain additional funds, nor was it possible to secure time for legislation. The way forward was therefore seen to be in local schemes of co-operation which improve mutual assistance arrangements in the event of a serious fire. The experiments that were launched were, however, beset by serious problems of jealousy between different localities, particularly where small towns were supposed to assist neighbouring villages. Much of the discourse was very localist, even parochial, in character. There was also a preoccupation with an ethic of 'voluntarism' which led both to impractical suggestions and to a side tracking from the main objective of fighting fires and ultimately exposed the schemes to some public ridicule.

Two experimental schemes were set up, one in North Derbyshire and one in North Norfolk. The journal *Fire* asked at the time why these particular areas had been chosen. One reason seemed to be that they had relatively efficient brigades already, while North Norfolk was thought to benefit from good roads and an efficient telephone service while piped water supplies were thought to be good in North Derbyshire. There may be other reasons, however, that were connected with traditional structures of authority in rural areas. The papers of the North Derbyshire scheme contain detailed and impeccably prepared instructions for quickly reaching the properties of the Duke of Devonshire and his family.

The scheme for North Norfolk rapidly became sidetracked, not perhaps helped by the lack of sophistication of the advice offered by the Home Office Fire Adviser, Lt.Colonel Symonds. There was some confusion about what the 'stand by' arrangements proposed by the Home Office would mean in practice, but Colonel Symonds responded that the chief officer should 'if the fire was at night, keep his trousers on and warn his men not to

go out of town.’ (Public Record Office, 1933, p.5) Colonel Symonds placed considerable emphasis on the role to be played by the boy scouts who were expected to identify and prepare suitable water supplies. However, difficulties quickly arose because of the lack of enough bicycles for them to discharge their proposed duties. The journal *Fire* was able to make some humorous remarks about the efforts of the Home Office to mobilise the boy scouts, culminating in a dismissal of ‘carpet-slipper schemes’. In any event, the Norfolk local authorities quickly fell out with each other.

A fundamental difficulty of the scheme was that they depended on all the local authorities in an area cooperating through a joint board that those could raise funds by a rate and make payments to participating brigades on a fixed and/or fee per fire attended basis. They were therefore vulnerable to any one local authority defecting on the grounds that it did not want to put out fires in other localities or because they were suspicious of other authorities and the financial basis of the scheme. Nevertheless, the North Derbyshire scheme was successfully established and still operating at the outbreak of the Second World War on the basis of a levy of a penny rate. In part its success seems to have been based on the disproportionate contribution made by brigades in large towns in the area such as Sheffield which increased the incentives for participation through what was in effect cross-subsidisation.

The schemes took up a great deal of the limited time of Home Office officials who concluded that such schemes would not provide a satisfactory way of tackling the rural fire cover problem. The increased threat of war had led to a review of fire services provision by a departmental committee, the Riverdale Committee, and in turn to legislation in the form of the Fire Brigades Act 1938. These renewed the debate about

the form that fire services cover in rural areas should take, but this time in terms of comprehensive forms of provision.

The historical development of fire cover rules

‘The level of protection provided by a fire brigade ... depends on the time it takes to respond to a call, reach a fire scene and control the fire. This level, termed “fire cover”, therefore depends on the number, siting and strength of fire stations in terms of manpower and equipment’. (Ramachandran, 1998, p. 77). The United Kingdom evolved fire cover rules for the first time in the period following the passage of the 1938 Fire Brigades Act that established for the first time a statutory duty on local authorities to provide a fire service. The rules that were evolved were subsequently refined, but followed the basic model established during the immediate pre-war and wartime period. These rules are put into operation by brigades categorising their territories according to the perceived level of risk and specifying a minimum response time to fire calls. ‘This process largely determines over 70 per cent of the total cost of the fire service.’ (Audit Commission, 1995, p.2). A fundamental feature of these rules was the way in which they were drawn up prioritised the protection of property over the saving of lives, a feature that remained until the fire cover rules were withdrawn in 2003. Funding ‘has been directed towards property risk as opposed to known life risk’ and in particular to ‘protecting buildings in city centres’. (Isles of Scilly Fire Brigade, 2003, p.5).

There is an important relationship between the time it takes the first appliance to reach a fire where lives are at risk and the likelihood of lives being saved. This relationship is, of course, also affected by the time it takes for a fire to be detected, hence the importance of the installation of devices such as smoke alarms. However, speed of detection is a

matter for fire prevention policies where the influence of public policy is exercised indirectly on households rather than directly on a public service. In looking at the relationship between the brigade being called and the arrival of the first appliance, it is important to bear in mind that the required response time in rural areas for the last sixty years has been twenty minutes while in remote rural areas there are no standards at all. Even in the less remote rural areas, response times are such that they can place lives in jeopardy:

1 in 24 fire casualties are likely to be fatally injured in a 6 to 10 minute response time, compared to 1 in 18 for a 11-15 minute response time. The highest fatality rate is observed for a response taking over 20 minutes, a 1 in 6 fatality rate per fire casualty. This is taken to equate to a “no fire cover” fatality rate as persons remaining in a serious fire after this time are very likely to be fatally injured ... a 11-15 minute response time should reduce risk of fatal injury by about 65%, i.e. averting 6.5 out of every 10 deaths which would otherwise occur. (Entec, 1999, pp.14-15).

Fire cover rules have an important bearing on the quality of the fire service received in a particular location and the likelihood of an individual surviving a fire. The Riverdale Committee which reported in 1936 had a rather simple threefold model of risk with the lowest category being ‘the mainly rural area, with scattered villages and hamlets, and isolated homesteads.’ (Riverdale, 1936, pp.25-6). They envisaged that in a rural area one appliance should be able to arrive within twenty minutes. The difficulty that the Home Office faced in converting these proposals into cover rules was that many rural areas either had no fire service at all or an inadequate one. The Home Office did have some sympathy for the position of the rural districts ‘for some of them contained heavier

risks than the smaller Boroughs and Urban Districts'. (Dixon, 1957, p. 66). However, public expenditure constraints made it difficult to make additional provision and remoter rural areas in particular lost out. 'The main adaptation to rural districts was that in the more rural parts fire posts with hand appliances should be developed rather than patrols with mobile appliances.' (Dixon, 1957, p.68). This form of provision is always going to be unsatisfactory, but has persisted until the beginning of the 21st century in the form of equipment dumps in sheds in remote parts of the Scottish Highlands and Islands. It was also envisaged that there would be an extensive provision of local fire units that would be 'equipped with light appliances for the purpose of attacking a fire in isolated rural areas in its early stages, pending the arrival of a major appliance.' (Public Record Office, 1958, p.8). These proved to be of little real value.

When the Home Office started to draft fire cover rules following the passage of the 1938 Fire Brigades Act, it used a system of 'weighted street mileage' which reflected the priority given to the protection of commercial property rather than saving lives. As the author of the scheme admitted, 'the conception of "weighted street mileage" which had such an important role in connection with the urban schemes had little relevance in the case of the rural districts.' (Dixon, 1957, p.69). This work was suspended on the outbreak of war, but was resumed in 1943. What emerged was a six fold categorisation in which rural areas were treated as a residual category with a first attendance time of twenty minutes which was to remain in place until the fire cover rules were abolished in 2003. Remote rural areas were to have no specified attendance requirements.

Consideration was given to reducing the first attendance time to fifteen minutes in rural areas but 'it appeared that this would entail an extensive provision of additional major

pumps'. (Public Record Office, 1943, p.1). In 1958, these categories were collapsed into four, but this did not affect rural areas except that they were now known as Class D rather than Class F.

The level of provision in rural areas was not adequate in the event of major fires which admittedly were relatively rare events. In Class A areas, the recommended level of attendance was inadequate in the case of only one per cent of fires. In contrast, 'In 90% of the large loss fires occurring in D risk areas, the first attendance was inadequate.' (Home Office, 1980, p.21). The dilemma for policy makers was 'that it would be possible to provide for shorter initial attendance times only at a cost which would be quite disproportionate to the number of fires occurring and the damages and casualties which they cause.' (Home Office, 1980, p.23). Nevertheless, contemporary data for England and Wales suggests that the number of deaths per capita per annum in 'D' areas is above that for 'B' risk or urban areas, but the cost of cover in these areas is around three times as high, reflecting the fact that they are mainly served by full-time rather than part-time or 'retained' brigades.

[Insert Table 1 near here]

The distribution of risk categories in England and Wales in 1993 is shown in Table 1. Areas may be reassigned as a result of local fire cover reviews. It was suggested in a discussion with a fire policy expert that heads of local brigades have sufficient leeway to influence the outcomes of such reviews. While the fire cover rules were in force, fire stations could be closed provided it could be demonstrated that fire cover standards would continue to be met. Sometimes questions have been raised in inspections of rural county brigades that are almost entirely classified as 'D' risk about why they have no

remote rural areas with their lower standards of cover. Thus, an inspection report on the Shropshire brigade observed, 'The Brigade does not classify any areas as "Remote Rural" risk which is surprising given its rural nature. Any further review of fire cover should identify the area, if any of remote rural risk.' (HM Fire Service Inspectorate, 1999, p.12).

Problems of providing cover in rural areas

'Despite the fact that D risk and Remote Rural areas have increased, the number of retained pumps, which typically cover such areas, have declined'. (Audit Commission, 1995, p.48). This is in spite of a number of factors that might justify at least maintaining levels of cover. Tourist traffic can affect speed of attendance in some areas in the summer months. As road traffic has grown generally in rural areas, attendance at road traffic accidents has become a more important part of fire brigade work, reflected in an evolution towards a 'fire and rescue service'. Motorways and other busy roads may pass through sparsely populated areas, justifying a higher level of cover than might otherwise be necessary. Some particular risks are peculiar to rural areas. The Dorset brigade, where one in six new houses is thatched, has a policy of dispatching five rather than the normal two pumps to fires in properties with a thatched roof. Gorse or heath fires can also be a major problem as they are very persistent and can require large deployments of personnel over a long period to tackle, a difficulty when the fire service is reliant on part-time personnel with other forms of employment.

Securing retained fire fighters has become increasingly difficult as the demographic balance of rural areas has changed with more people working outside of the area during the day. As farming populations decline, one source of recruits becomes less available.

The Maclean Report on retained, auxiliary and volunteer fire fighters in the Scottish fire service makes a distinction between two types of rural area. Small units located in a remote rural community may have already recruited most of the able-bodied people living in the community with the total pool falling because of declining local employment opportunities. Where a rural community is close to a large urban centre where most of its inhabitants work, 'the link between the fire station and the community is less close than in the smaller communities, and it can prove difficult to find recruits who are prepared to commit their time to the Fire Service.' (Maclean, 2002, p.4.3).

Regardless of the characteristics of the area, some employers are understandably reluctant to allow employees to leave work to attend incidents. Somewhat surprisingly, the Scottish study found that local authorities were particularly difficult about arranging time off. 'Generally employers who had experienced a fire themselves were more inclined to support employees who wanted to join the service or to take time off for service duties, as were those who were (or had been) members of the service themselves.' (Maclean, 2002, p. 5.2). Even self-employed individuals can find that call outs can disrupt their work schedules. One solution to these difficulties is to provide paid crews in the day time during the week, but this is a relatively expensive solution and can only be justified in semi-rural areas where there is a high level of call outs. A more innovative approach is to change the gender basis of fire fighters and actively recruit more women. Cornwall, which has a ten per cent shortage of retained fire fighters, is to experiment with the employment on-call nannies in an effort to make it easier to attract parents.

Reducing loss of life in remote rural areas

As the earlier discussion has suggested, loss of life from fire is a particular problem in remote rural areas. Nevertheless, a major 1998 Home Office report on modernising standards of fire cover notes that ‘The issue of how fire cover might be provided in sparsely populated areas was not fully explored within the scope of the work undertaken for us.’ (Home Office, 1998, p.viii). Fire cover tends to be a peripheral issue within debates about rural policy and also marginal within discussions of fire policy.

Nevertheless, the issue is a particularly important one in Scotland where two-thirds of the land area is sparsely populated and it is here that it has received most systematic attention. The Highlands and Islands region of Scotland has ‘one of the highest rates of fire death for any region of the UK and would need to be more than halved to fall to the UK average.’ (Entec, 1999, p.iv). The problems that can arise in practice are graphically illustrated by a number of case studies in the Entec report. For example, a fire broke out at night in a domestic dwelling in Caithness. The nearest fire service was provided by a non-mobile volunteer unit at Dunbeath which was only three miles from the house but took twenty-five minutes from mobilisation to attend. When they arrived they borrowed a ladder from a neighbour and attempted to enter a window where a father and child had been seen. However because they had no breathing apparatus they were unable to enter. A retained unit arrived eight minutes later and removed the bodies of the father and child.

In 1999 approximately a quarter of the population of the Highlands and Islands was served by volunteer units. In 1999-2000 volunteer or auxiliary units accounted for 56.1 per cent of the total operational complement of the Highlands and Islands brigade with all but two of the Scottish brigades having some units of this kind, the next highest

proportion being 8.1 per cent in Strathclyde. (Maclean, 2002, p.1.3). These units varied from non-mobile brigades that had access to an equipment dump which was then transported in the volunteers' cars to the incident to units that had an adapted transit or pickup van painted in fire engine red. However, the units would not have breathing apparatus and if they had ladders they would generally not reach beyond the second storey of a building. Because they did not have pagers, they generally took longer to mobilise than the five minute expectation for a retained unit. It is therefore not surprising that there is a greater likelihood of death by fire in areas served by volunteer units despite a similar rate of dwelling fires to the Highlands and Islands as a whole. 'Indeed, the ratio of fire deaths to fire casualties is 1 to 4.5 in areas served by volunteer units compared with 1 in 10 for the Highlands and Islands as a whole and a ratio of 1 in 24 for the UK as a whole.' (Entec, 1999, p.29).

A review of standards of fire cover in the Highlands and Islands in 1996 suggested upgrading twenty-one volunteer units to retained status. This would make it possible to disband some volunteer units within a twenty minute attendance time of the retained units, leaving fifty-three volunteer units. The Entec report measured the costs of various types of cover against the cost of potential lives saved. The three types of cover were: a standard retained fire unit (£100,000 a year); a unit with a light fire appliance and a fire station with fire fighters paid eighty per cent of the retained rate trained in the use of breathing apparatus and with pagers (£60,000 a year, although a less well provided fire station could reduce this); a partly retained volunteer unit with an adapted transit van with two fire fighters paid eighty per cent of the normal retainer and all fire fighters having pagers and being trained in the use of breathing apparatus (£35,000 a year). Each of

these options would therefore overcome the problem of slow mobilisation times and an inability to enter smoke logged buildings because of the absence of breathing apparatus. The conclusion reached was that 'the dwelling fire risk warrants the expenditure required for one or another of the three fire cover options in 37 cases.' (Entec, 1999, p.46). Four would be fully retained units; ten would be retained units with light appliances; and twenty-three would be partly retained volunteer units. Taken together, they would provide a higher level of cover for about seventy-five per cent of the population of sparsely populated areas of the Highlands and Islands. However, 'Fire cover alone, within practical cost, is insufficient to reduce the fatality rate to as low as reasonable practicable. The prevention of fires and improvement of fire safety in the home is required to achieve this goal.' (Entec, 1999, p.61).

Other fire cover options were considered. Helicopters were rejected as impractical because of the mobilisation time required. Domestic sprinklers seemed to be the most feasible alternative to improved fire cover. It 'would be no more costly to install domestic sprinklers than to have auxiliary fire cover in the smaller communities. American experience with domestic sprinklers indicates that they avert over 50% of fire deaths in the home, compared with under 40% predicted here for fire cover.' (Entec, 1999, p.57). To be effective, however, they would require good water pressure which may not always be available in rural areas. Potential domestic users would also have to be reassured that they would not cause damage by discharging inadvertently or would cause water damage that outweighed that of a small fire. The debate is currently focused on the question of the provision of sprinklers in buildings that are seen as vulnerable to fire (e.g., multi-occupation) or that have vulnerable residents.

Since the Entec report, the Highlands and Islands brigade has created a new category of auxiliary fire fighters who are volunteers, 'but are equipped and trained to a level approaching that of a retained unit.' (Maclean, 2002, p.1.2). They are provided with a purpose-built station, have a medium appliance and are trained in the use of breathing apparatus. Unlike pure volunteer units, a local retained station is not normally mobilised at the same time and they are the sole response to most incidents. However, they are not paid which reduces costs and provides a cheaper option than the intermediate one between volunteer and retained envisaged in the Entec report.

The 2002 inspection report on the Highlands and Islands Fire Brigade expressed concern about the progress being made towards modernisation of cover in sparsely populated areas. 'The Inspectorate considers that the current arrangements, especially from those locations operating non-mobile units placed in small garden sheds, are not efficient, represent an implied standard of protection to communities which is not realisable, and present an unacceptable risk to firefighters operating from those sites.' (HM Fire Service Inspectorate for Scotland, 2002, p.15). The report attempted to identify strategic emergency cover locations, the implication being that thirty-two auxiliary fire stations would be closed, primarily on the grounds that they were not properly equipped with breathing apparatus. The political concern that this proposal aroused led to a debate in the Scottish Parliament in October 2003. In the longer run, however, it would seem that a solution involving the closure of some units and the upgrading of others cannot be avoided. The non-mobile fire brigade, in particular, seems to be a contradiction in terms. The solution favoured by the Highlands and Islands Brigade of converting all auxiliary units into fully retained ones would be too expensive.

It may be that there are some areas that are so isolated that feasible solutions to providing fire cover that are not prohibitively expensive are simply not available.

Islands

Islands present particular problems in terms of providing adequate fire cover, being described by an experienced informant as 'the ultimate problem'. The essential difficulty is that of providing reinforcement which may have to come from areas that are themselves sparsely populated or a great distance away. Where the island is relatively heavily populated, but reinforcement is difficult or impossible, the solution may be able to provide a higher level of cover than would normally be justified. In the case of some islands reinforcement is not a practical possibility.

The case of the Isles of Scilly illustrates some of the challenges that arise in providing an adequate fire service on a group of remote islands, although the islands are in the unique position of constituting their own fire authority. They are also classified as D risk whereas many islands are categorised as 'remote rural'. The main island of St. Mary's has a major and light pumping appliance and can also call on the men and equipment of the airport brigade which has two major airfield rescue units at its disposal. The island of Tresco has a light pumping appliance and trailer which is going to be replaced with a vehicle that has foam provision. The three other inhabited islands which have populations of one hundred each or less are each served by trailer mounted water bowsers and light portable pumps. This is quite a generous level of provision given that the island population is 2,153, although that can be doubled at the peak of the holiday season. Counting the holiday population, and treating the trailer and airport units as half a pump each that still gives a pump to population ratio of 1:782. (This is very similar to

the ratio of 1:785 on the Scottish island of Mull, counting volunteer units as half a pump). Perhaps this is reflected in the fact that no one has ever been killed in a fire on the islands. However, reinforcement from one island to another is a problem, particularly given that the water between the islands can be rough.

Nevertheless, the overall level of provision appears to be more than satisfactory. Perhaps the most acute problems are on isolated islands where no reinforcement is possible. The Entec report classifies Barra in this way and in one incident they discuss the mobile volunteer unit took thirteen minutes to mobilise and five minutes to travel to the fire by which time a fatality had occurred. 'Absolute safety from fire is practically unattainable or prohibitively expensive.' (Ramachandran, 1998, p.19). It can be very expensive to provide adequate cover on islands with small populations separated by often rough water from other islands or the mainland. The Entec report on the Highlands and Islands creates a five category ranking of cost of cover. The most expensive category is where fewer than four hundred residents are served and the cost per life saved exceeds £1.25m for lower cost auxiliary cover even if a high risk rating is applied. 68 per cent (seventeen) of the island units analysed are in this category and the island units also make up nearly half (46 per cent) of the category. Remote and isolated islands pose some of the most difficult issues for cost effective rural fire cover.

Conclusions

The development of rural fire cover was slow and haphazard in Britain. Even when fire service provision across the country was made a statutory requirement, rural fire service provision was hampered by a perception that rural areas were less important and less deserving of the release of national resources. An emphasis on protecting property,

particularly commercial property, in fire cover rules meant that insufficient attention was given to rates of death from fire in rural areas, particularly remote rural areas. The problem of remote rural cover was given greater attention in Scotland, but over time tensions have developed between local demands for adequate cover and the enthusiasm of volunteers and increasingly stringent health and safety requirements for fire services. It is difficult to reconcile what is feasible in terms of realistic costs and available personnel with the need to provide a service that is sufficiently sophisticated and responsive to save lives. In rural areas more generally, recruitment problems are becoming increasingly serious with the Bain Report estimating that there is a national shortage of twenty per cent of the complement. (Bain, 2003, p.11.8).

Both the Bain Report and the subsequent white paper make little reference to the specific problems of providing fire cover in rural areas. The Bain committee did not make any visits to fire brigades in predominantly rural areas such as the west of England. Their discussion of the role of retained brigades was focused on what they saw as the need for greater integration with the whole time service and the removal of artificial demarcation lines. It is difficult to forecast what impact the replacement of fire cover rules by integrated risk management plans will have on rural fire services. It may allow for greater sensitivity to the specific needs of rural areas, but it could also lead to a slippage in standards of cover if there are no required first attendance times. The Bain Report envisaged that a risk-based approach would mean 'reducing emergency fire cover where there is little scope to save lives' (Bain, 2003, p.5.11). This could lead to a reduction of service levels in remoter rural areas.

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Table 1

Percentage of national area within risk category, England and Wales, 1993

Risk category	Percentage within risk category
A	0.3%
B	1.0%
C	7.0%
D	83.8%
Remote rural	7.9%

Source: Audit Commission, 1995, p.48