

The Fire Brigades Union



It's about time

Why emergency response times matter to firefighters and the public



Contents

- Preface** 2

- 1. Introduction** 3

- 2. They say response times don't matter** 5
 - 2.1 "Deaths offset" 5
 - 2.2 Traffic congestion does not explain it 5
 - 2.3 "80% already dead" 6
 - 2.4 Variation in local response 6
 - 2.5 The postcode lottery 8

- 3. Why response times matter** 11
 - 3.1 Saving lives 11
 - 3.2 Homes and workplaces 14
 - 3.3 The environment 17

- 4. Conclusions** 19
 - 4.1 The case for national standards 19
 - 4.2 What should national standards be based on? 20
 - 4.3 Risk-assessed resource planning 21
 - 4.4 For national standards 22
 - 4.5 It's not just about time 22

- Appendices** 24
 - Appendix 1: Average response times in dwelling fires by country and FRS area, UK, 2006-2008 24
 - Appendix 2: Previous National Standards of Fire Cover 27
 - Appendix 3: Simplified draft national fire cover guidelines for protection of life from fire in dwellings. From Entec 23 May 1997 28

**Matt Wrack,
FBU general secretary**

Saving people's lives is still the heart of a firefighter's job. Over 3,000 people are rescued from fires in England every year, according to imperfect government data.¹

Between 500 and 600 rescues from fires are carried out annually in Scotland, according to official figures.² The Fire Brigades Union estimates that 200,000 people have been rescued from fires or vehicle crashes since 1990, when records began to be kept. And many more have been rescued from terrorist incidents, floods and other 999 incidents.³

These are people who might be dead today, but are alive because of the intervention of firefighters. These are people who might have far more serious injuries, but for the rapid response of firefighters. It is to preserve life – to save those who would otherwise perish – that firefighters adhere so strongly to the motto: "every second counts".

The importance of emergency response is widely recognised. The FBU agrees with the House of Commons Communities and Local Government (CLG) Committee, which wrote recently: "The primary purpose of the fire and rescue service is the prompt and efficient mobilisation of firefighters in response to a fire or other related incident, in order to save lives and protect property. This is a key aspect of public safety."⁴

Yet responses times have worsened significantly over the last decade. The time between an emergency call being received and a fire engine arriving has risen slowly upwards. This is a vital concern for members of the public, who rightly expect that when they make the call for help, it will come quickly.

Increasingly, senior individuals within the fire and rescue service attempt to perpetuate the myth that it doesn't matter how long it takes to get to a fire. They say it's already too late, or it is better to put resources into preventing fires. But fire alarms are most useful because they widen the window of intervention – they give people more time to call for help and more time



for firefighters to get in, effect a rescue and put the fire out with the minimum of damage.

Firefighters will not accept the argument that response times are irrelevant. Built into a firefighter's DNA is the desire to intervene swiftly – to make that difference as to whether someone lives or dies, whether they are temporarily overcome with smoke or maimed for life, or whether someone loses their home and their prize possessions.

To be told that rapid response to fires and other emergencies somehow doesn't matter, or is "offset" by other fire prevention measures, simply won't wash with firefighters. Response times matter because people and their lives matter. That's our creed.

The Fire Brigades Union and its 45,000 members – as well as a sizeable number of chief fire officers, fire authority members, fire industry and technical experts, the business community and the insurance industry – all recognise the importance of response times. On those occasions when the public are meaningfully consulted and given the opportunity to air their opinion, they are in chorus opposing cuts that result in fewer firefighters, stations and engines and increased response times.

This report argues that the lack of underpinning national standards has led the fire and rescue service down a very dangerous road. It is a road that has led to the worsening of response times, increased fire losses and increased deaths of both members of the public and firefighters. In the following pages we illustrate how far things have been allowed to slip. With reference to current examples, we will show the science and evidence that supports the FBU position and conclude with practical proposals. The document explains the need for national response standards in Scotland and England, as have been in place in Wales since 2006.

The public are right to expect a decent level of provision. Communities, workplaces and businesses all need to know that when they call the fire and rescue service, they will get a rapid response – whenever they need it. FBU members will be campaigning on the issue, speaking to councillors and fire and rescue authority/board members, MPs, MSPs, MLAs and AMs (where appropriate) and mobilising members of the public to make response times an issue. **It's about time.**

¹The number of people rescued from fires in dwellings by the fire and rescue service in each year 1994 to 2006. Hansard, 21 April 2008 (1404W)

²Fergus Ewing, Scottish Minister for Community Safety, 25 February 2010 (S3W-31446)

³FBU, 2008, Tragedy, Loss, Hope, Help http://www.fbu.org.uk/newspress/pressrelease/2008/pdf/frs_rescues_report.pdf

⁴House of Commons Communities and Local Government Committee FiReControl Fifth Report of Session 2009-10, 1 April 2010, p.7

1. Introduction

It should be a scandal that fire service response times across the UK are getting worse. The FBU has found evidence in official figures which show that appliances are taking longer to get to fires now than a decade ago. The union does not accept that this is just because of traffic congestion, as response times at night are also slower.

In 2009, the Department for Communities and Local Government (CLG) published a report called *Review of Fire and Rescue Service response times: Fire Research Series 1/2009*, written by Greenstreet Berman Ltd⁵. Table 1.1 from that report showed how average response times in England had increased between 1996 and 2006:

The authors of the report used the Fire Service Emergency Cover toolkit (FSEC) to predict the effect of increased response times. FSEC predicted that increased response times may contribute to:

- 13 additional fatalities in dwelling and other building fires each year;
- possibly 65 additional deaths in road traffic collisions (RTCs); and
- an £85m increase in other buildings fire damage.

Further evidence gathered from the official statistics has shown that response times continued to worsen in 2007 and 2008. Figures released on 22 March 2010, in response to a question by John McDonnell MP, show slower response times to dwelling fires in many parts of the country (see Appendix 1). For England alone, if these figures are added to those in the Greenstreet Berman/CLG report, response times for dwelling fires increased by 22% between 1996 and 2008. They have also worsened in Scotland and in Northern Ireland.

The government does not publish accessible figures on the issue. Statistics are fragmented across different departments responsible for fire in England, Scotland, Wales and Northern Ireland. This makes it difficult to compare like with like from service to service and is clearly not a mistake by some who wish to hide the consequences of their actions.

Why response times are getting worse

The FBU believes that the real reason for slower response times is the disastrous, Westminster-inspired "modernisation" approach adopted by some fire authority and fire board chairs and embraced by many chief officers over the last five years or so. The removal of national standards of fire cover, the shift of emphasis almost entirely towards prevention and community fire safety – at the expense of emergency intervention – and the grinding process of cutting firefighter jobs are the central causes of the problem.

The 1985 Standards of Fire Cover were a performance measure that was valued by the public and was repeatedly shown to be correlated to the outcome of emergency incidents. Logically, those standards must be one benchmark against which improvements must be gauged.

The 1985 national standards were replaced almost overnight by a process known as Integrated Risk Management Planning (IRMP). The Fire Brigades Union had always fully supported a risk-based approach to fire cover so long as it was conducted according to a robust methodology. However, IRMP was introduced by the UK government in such a way that fire cover "standards" would be set, fire authority by fire authority, in the full knowledge that they would

Table 1.1: Average response times for primary fires in England

Primary fire category	Average response time (minutes)		Increase in response time
	1996	2006	
Dwelling fires	5.5	6.5	18%
Other buildings fires	5.7	6.8	19%
Vehicle fires	6.7	7.9	18%
Outdoor fires	9.7	11.1	14%

Source: Greenstreet Berman/CLG report, Table 3, page 17

⁵CLG, *Review of Fire and Rescue Service response times – Fire Research Series 1/2009*
<http://www.communities.gov.uk/documents/fire/pdf/frsresponsetimes.pdf>

determined not by a thorough-going analysis or assessment of risk, but would instead be concocted in order to match the funding levels politicians wished to allocate.

The fire and rescue service legislation introduced in England and Wales in 2004, in Scotland in 2005 and for Northern Ireland in 2006 introduced the principle that from time to time the government would produce national framework documents, which would set out its expectations and confer tasks upon fire and rescue services (but not requirements). The language used in this wholesale uprooting of the machinery and performance standards was that of "improvement". The most recent national framework for England mentioned the word *improvement* no less than 41 times; the draft Scottish framework mentions it 15 times; the framework for Wales mentions it 20 times. At the same time as withdrawing the national standards of fire cover, the simultaneous abolition of the consensus

committees, the Central Fire Brigades Advisory Council (CFBAC) and the Scottish Central Fire Brigades Advisory Council (SCFBAC) prevented the inclusive discussion of a replacement standard.

The government with cross-party support not only removed the safety net of national standards but also scrapped all the findings and research achieved through the Fire and Emergency Cover Review (Pathfinder) trials which were undertaken to find an evidence-based alternative to the "minimum standards".

The result is a postcode lottery, where people in some parts of the country have to wait for over an hour before anyone arrives to put a fire out. This is not acceptable to firefighters – the public deserve a better service than this. The FBU is determined to defend our service and the central role of emergency response within it.



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2. They say response times don't matter

Policy for the fire and rescue service in England is set by the Department for Communities and Local Government (CLG). It appears that CLG and many others in the management of the service think response times do not matter. In Scotland, Wales and Northern Ireland policy is devolved. Both Wales and Northern Ireland have response standards in place. Scotland currently has no national standard for response.

2.1 "Deaths offset"

In 2009, CLG published a report, *Review of Fire and Rescue Service response times: Fire Research Series 1/2009*, written by Greenstreet Berman Ltd. The report expressed no remorse for 13 fire deaths caused by increased attendance times. It showed no suggestion of alarm that a deterioration of performance has left 13 people dead in 2006 (in England) who would not have died in 1996.

Instead, the report concluded that: "Annual dwelling fire fatalities fell by 142 between 1996 and 2006. This suggests that the impact of increased response times on dwelling fire deaths has been more than **offset** by other factors such as community fire safety, between 1996 and 2006." (Our emphasis)

In other words, 13 people might have died in fires who might otherwise have been saved, but it's as though it doesn't matter because the primary focus of the fire service, community fire safety, saved 142 people. The **net effect** is that 129 fewer people die each year.

To the consternation of the FBU, the message sent out by this report is that there is no urgency attached to attending fires, even those where people need rescuing. As long as community fire safety is preventing fires from starting in 11 houses, so their "theory" goes, it doesn't matter if someone dies when a fire starts in a twelfth house. Their death has been "offset".

In Scotland, the minister for community safety commissioned a report into fire deaths and injuries after a 62% increase in fire deaths during 2007-08. The report highlighted a falling trend in fire deaths by referring to statistics going back as far as 1990, long before the removal of response standards. It noted changes in legislation, such as the Furniture and Furnishings (Fire) (Safety) Regulations 1988 and the Building Standards (Scotland) Regulations (1990, amended 1993). The report

provided such little detail as to make it all but impossible to accurately assess the information. And fire deaths have hardly fallen since 1994.⁶

Scotland consistently reports a higher rate of deaths than the other parts of the UK and has recorded approximately double the average rate of deaths in recent years. The report into fire deaths discussed the relationship with response time in just three short paragraphs, where it determined that the relationship is a "complex one" and concluded that "more research would require to be undertaken". The remainder of the extensive report goes on to examine ways in which fire safety can be enhanced. Laudable as that may be, it once again reinforces the view that firefighting is immaterial.

This message has crept into the fire and rescue service over the last 15 years and it is underlined and reinforced by the Greenstreet Berman/CLG report. The fire and rescue service has drifted into a world where, when it comes to injuries and deaths, it only cares about statistics not actual people. Any other impacts that fire has on the community are only of consequence to the extent that they can be reduced by "the primary focus of the fire service", by community fire safety.

In contrast to this disjointed approach, the FBU does not counterpose prevention and intervention. The FBU wants firefighters to assist in preventing fires where they will make a measurable difference, but their primary focus must be dealing with fires and other emergencies that do occur as quickly as they can in sufficient numbers to make an effective and safe intervention as early as they can.'

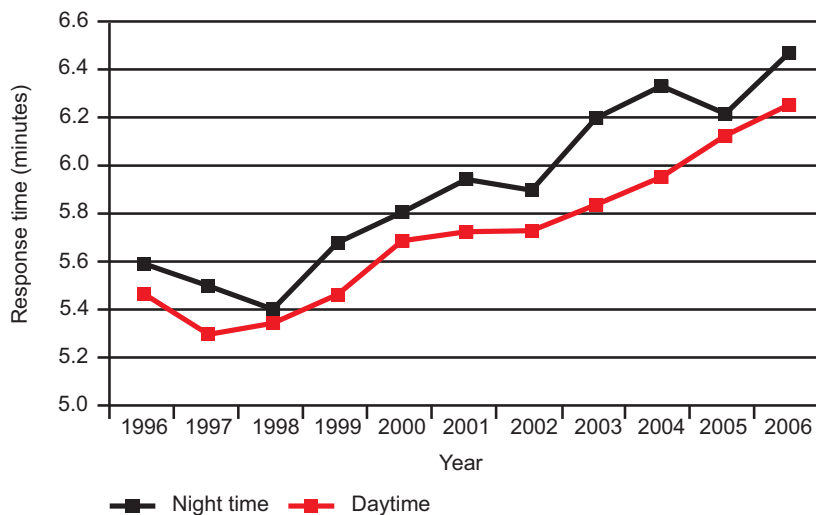
2.2 Traffic congestion does not explain it

Rather than attempt to look for the more complicated underlying reason for increased attendance times, Greenstreet Berman/CLG put it all down to traffic congestion.

Yet their own report shows that fire service attendance times have increased during the night as well as the day. Unless traffic levels during the night are the same as those during the day (and everyone knows that they aren't), this data alone disproves the traffic congestion theory.

⁶Brian Sweeney, Scotland Together: A study examining fire deaths and injuries in Scotland
http://www.strathclydefire.org/pdfs/Scotland_Together_07_09_09.pdf

Figure 2.1: Day and night time dwelling fire response times (all English FRSs)



Source: Greenstreet Berman for CLG, Figure 5 p.20.

2.3 “80% already dead”

In 2007 CLG was asked by MPs why it is now taking longer for fire services to respond to fires and other emergencies.⁷ On behalf of CLG, senior official Chris Wormald replied: “Around 80 per cent of fire deaths have already happened at the point at which the fire brigade is called. The actual effect of response times on the death rate is really comparatively small.”

The MPs were surprised at this claim and one, John Cummings, asked: “Have we got a worse service now than we used to have in terms of responses?”

Wormald’s disingenuous reply was: “I am not denying that the number has gone up, it clearly has. What I am saying is that this does not equate to a worse service.”

The FBU was deeply dissatisfied by this comment at the time and asked Sadiq Khan MP (then England’s fire minister) to explain the background to the statement. Khan’s reply was that Wormald’s comments reflected research by environmental and engineering consultancy Entec published between 1996 and 1998, and also “the evidence provided in a paper given by the then director of the fire and resilience directorate, Clive Norris, at a human behaviour in fire conference in 2004” (Letter to David Lepper MP, 17 December 2008).

This wasn’t evidence. It was simple regurgitation of a previously stated fiction.

But where did the English fire minister get the idea that Entec research had reached this conclusion? At one point the Entec report actually said:

“There are a proportion of occasions on which victims die prior to the fire brigade receiving an emergency call. This is consistent with the relatively small difference in the fatality rate for fires attended in under five minutes and fires attended in 6 to 10 minutes, i.e. **there appears to be a minority of fires where attendance in response to a call will not avert the death however fast the attendance is.**” (Our emphasis)

Unless “80%” is a “minority” of fires, the minister and the civil servant were categorically wrong about the Entec research.

2.4 Variation in local response

This indifference, even contempt, for the increase in response times and the increases in death and injury rates, as well as burgeoning fire damage that they lead to, originated in central government and has found its way into local government through the Integrated Risk

⁷Communities and Local Government Committee – Minutes of Evidence, Questions 18 and 19, October 2007

Management Planning (IRMP) process. This has allowed local fire and rescue services to set their own response standards, often in practice far worse than the previous national standards of fire cover (Appendix 2). We provide here some examples. Sadly, we find that the appalling situation they illustrate is the norm, not the exception.

Surrey

In Surrey the current attendance standard is that 85% of the population will receive an appliance within eight minutes of a call. There is no mention of risk or local circumstances. Is it the case that community fire safety has ensured that the risk is identical in 85% of households in Surrey? This cannot be the case.

Even if it is, what does the "85% of the population" part of the standard mean? Does it mean that everyone in Surrey will get an appliance within eight

minutes on 17 out of 20 times that they call for one? Or does it mean that 85% of the population will get an appliance within eight minutes every time they call, and the other 15% will never get an appliance within eight minutes?

If it means the latter, and in many fire and rescue services with similar local attendance standards it does, what it really means is that 15% of the population **have no attendance standard** whatsoever. This is unacceptable.

We understand that Surrey has struggled even to meet this standard, so it is considering worsening its response standard to an appliance within 10 minutes. If this is the case, then quite obviously the attendance standard is based on the resources that the brigade has, **not the risk faced by the community**. Compared to the simple resource-based, blanket approach to fire cover adopted by services like Surrey, the old national standard, graded on the basis of building density, was a highly sophisticated risk management tool.

East Sussex

Just over the border from Surrey in East Sussex, the *Our Service Charter and Standards* document says that the fire and rescue service sets a standard of one fire engine with a minimum crew of four to arrive at a house fire within 13 minutes on 90% of occasions. The FBU argues that one fire engine cannot deal with a house fire – it needs a minimum of two fire engines and nine firefighters.

For the city of Brighton the current minimum is a major reduction in standards. Before national standards of fire cover were abolished, much the centre of Brighton would have received one fire engine with five firefighters within five minutes and the second fire engine with four firefighters within eight minutes. Between 2001 and 2004 East Sussex had 2,747 property fires, with 1,203 of these in Brighton. So nearly 50% of the residents of East Sussex who had property fires have a significantly worse standard of fire cover now compared to the old national standards of fire cover.

Devon and Somerset

Devon and Somerset fire and rescue service has also taken the blanket approach. Ignoring the variation of



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risk across communities, and ignoring what is reasonably practicable in larger population centres, Devon and Somerset has set "a single response time regardless if a house is in a city centre or rural village".

However, in the case of Devon and Somerset, the first attendance of a fire appliance will be within 10 minutes, with all resources arriving within 13 minutes. There is no mention of the proportion of occasions when this should happen.

In its 2009/10 to 2011/12 corporate plan, Devon and Somerset does attempt to compensate for this: "If the first appliance arrival is likely to be longer than 10 minutes, then the resources sent should be increased to 12-crew in order to deal with the possibility of a more developed fire." It is helpful, but it is not a solution.

Humberside

According to Humberside fire and rescue service's website, it takes a risk-based approach. It says it has undertaken a detailed assessment of the risk faced by the public and set attendance standards for dwellings (which require two fire engines to be sent).

The first appliance should arrive within the following times:

Very high and high risk areas	Within 8 minutes on 90% of occasions
Medium risk areas	Within 12 minutes on 90% of occasions
Low risk areas	Within 20 minutes on 90% of occasions

These response times are below previous national standards. And Humberside has set a standard for the second appliance to arrive within five minutes of the first appliance being in attendance on 80% of occasions. So people will be waiting a long time for two fire engines to arrive within the set standard.

Essex

As recently as 11 November 2009, the minutes of the meeting of Essex fire authority's challenge and innovation committee record its chief fire officer as saying: "Most fatalities occurred before fire services were alerted... national data evidenced that a

response time of less than eight minutes was no greater life saver than a slightly slower turn-out."

This comment is not backed by evidence and, as explained in this document, is contrary to the real situation.

Grampian

Astonishingly, the depths have been plumbed even lower by Grampian fire and rescue service, which has recently published a set of response standards in which there are no target attendance times or minimum standards for any incidents unless they involve a threat to life.

There are some basic questions which we would have expected the members of the fire and rescue authority to have asked of the proponents of the plan, such as: "What are the outcome targets for property damage?" or "How can they be performance managed without an output target for attendance?"

2.5 The postcode lottery

It is important to remember that the difference between fire cover in cities and that in villages could be explained as the outcome of a reasonably practicable response to the overall risk in each location. However, a person living in a domestic dwelling in one part of the country has every right to expect their 999 call to be treated just as importantly as one from another person in similar accommodation elsewhere.

But today, it is not simply that the level of service you receive from the fire and rescue service depends on where you live. Rather it is that identical cities have different standards of emergency response and villages have different standards of emergency response depending on where in the country they are located, not depending on the type of risk.

The FBU finds it incomprehensible that of the five services previously identified, they can all produce different attendance targets – and in many cases completely different emergency response – for properties which in many cases must be of a similar nature. If an integrated risk management planning process has been carried out, as it should be to determine the necessary speed and weight of response according to the type of risk, then surely common standards should emerge.

Off the run

For several years it has been common practice in many fire and rescue services to take appliances "off the run" while the crew are training and to send the next nearest appliance to fires. This practice started as a procedure to enable essential breathing apparatus training to be carried out. Today pumps are taken off the run for a whole range of reasons. In many services, appliances are taken off the run to deliver community fire safety leaflets. Some examples are shown below:

- South Yorkshire trialled a specialist small vehicle and sent it from one end of the county to another to attend small fires while the nearest appliances sat on station (see box).
- Every other day shift there are two pumps off the run in Plymouth to carry out community fire safety or training. But this cut in service is dressed up as a good thing by saying that community fire safety and training are not "interrupted". That is, "interrupted" by people whose lives and property are at immediate risk of loss.
- Similarly, in Greater Manchester pumps are taken

off the run at different stations around the city on different days in a process called FORD (flexible operational resource deployment). But the public are kept in the dark as the GMC fire and rescue service website still says that city fire stations have two appliances. It doesn't point out that they only have one appliance on weekends, bank holidays and every Thursday. The FBU wants to be clear. In GMC, as with so many other fire and rescue services, the appliances are coming off the run for long periods of time, behind the closed station doors, with the public being totally unaware, because of a shortage of the number of firefighters employed in fire and rescue services.

In fire and rescue services that have implemented this kind of policy, the pumps that are taken off the run are euphemistically called a "strategic reserve".

The local standards that have replaced the national standards are often seen as "maximum targets" that should not be exceeded, rather than minimum standards that should be surpassed in order to provide the best quality of public service. There is no enthusiasm by policy makers in the fire and rescue service to beat the local standard by a significant margin.

South Yorkshire

The FBU has uncovered damning evidence of poor response times in South Yorkshire, at a time when the South Yorkshire fire and rescue service (SYFRS) was threatening to sack almost its entire workforce

At 18:48 on the 17 November 2009, a member of the public telephoned 999 to report a wheelie bin on fire. The call was put through to SYFRS.

SYFRS employs over 1,100 staff to fight fires, it has a fleet of 43 frontline emergency vehicles distributed around 23 fire stations, and yet firefighters did not arrive at this wheelie bin fire until 19:55 – 1 hour and 7 minutes after the call was made.

SYFRS has, without any informed public consultation, decided that a wheelie bin fire is a "category 2 incident". It then decided to trial the use of a vehicle (called a "CAT 2 vehicle") that has been designated to attend "category 2 incidents" across the county.

The CAT 2 vehicle isn't a fire engine, it is a

Mitsubishi 4x4 pick-up with as few as three firefighters on board. There was only one CAT 2 vehicle put on trial, so if two, three or more category 2 incidents are reported within a short time of each other, they are simply put on a list for the CAT 2 vehicle to attend when it can – regardless of what the other 42 SYFRS front line emergency vehicles are doing at the time.

If it takes half an hour for the crew of the CAT 2 vehicle to deal with each incident, and 10 or 15 minutes to drive from one to another, it is only to be expected that it might take 1 hour and 7 minutes to reach the third fire on its list. In fact, 1 hour and 7 minutes is not a bad attendance time. Records show that it can take 2½ hours to get to the scene of a "category 2" fire.

As a result of the CAT 2 vehicle trial, which is a manifest example of the experimentation with public service and public safety taking place within the fire and rescue services, there is nothing short of a scandal in South Yorkshire. The following table shows some examples of the recent performance of South Yorkshire fire and rescue service.

Table 2.1: South Yorkshire Fire and Rescue Service CAT 2 vehicle trial – examples

Incident	Attendance time
Wheelie bins	20 minutes
Controlled burning	58 minutes
Controlled burning	1 hr 33 minutes
Wheelie bins	50 minutes
Refuse container	1 hr 40 minutes
Grass and heathland	1 hour
Refuse container (asbestos and cylinders involved)	1 hr 21 minutes
Trees and street furniture	50 minutes
Refuse container	2 hr 25 minutes
Small fire out on arrival	1 hr 47 minutes
Refuse container	1 hr 40 minutes
Car	13 minutes (for CAT 2 vehicle) Cat 2 vehicle unable to extinguish... 5 minutes additional (for major pump)
Builder's material	57 minutes
FAGI (false alarm, good intent)	52 minutes
Refuse	35 minutes
Refuse container	23 minutes
Refuse container	31 minutes
Bins near flats	43 minutes
Wheelie bin at rear of shops	23 minutes
Skip	25 minutes (for CAT 2 vehicle) Cat 2 vehicle unable to extinguish... 7 minutes additional (for major pump)
Wheelie bin	13 minutes (for CAT 2 vehicle) Cat 2 vehicle unable to extinguish... 6 minutes additional (for major pump)

3. Why response times matter

3.1 Saving lives

The size of a fire is sometimes described as “doubling every minute”. If the size of such a fire were plotted on a graph, it would create a curved line like the one shown in Figure 3.1.

It could happen, but strictly speaking, there is no reason why a fire should really double in size every minute. When fire engineers work out fire safety solutions for buildings, they commonly assume that a fire’s rate of growth can be slow, medium, fast or even ultra fast, but that in any of these cases its size increases in proportion to “time squared”. They call these fires “t squared fires”. A medium and a fast “t squared” fire are also shown in Figure 3.1.

The important thing in Figure 3.1 is that the rate at which the size of any fire increases itself increases with time. For example, between minutes 3 and 4, the fast-growing fire increases in size by about 12 units, but between minutes 9 and 10 it increases in size by over 40 units.

What does this mean for survivability and fire damage? What does it mean for the ability of firefighters to extinguish the fire safely? What it means is this:

- If a person can survive in the conditions near to a fire three minutes after ignition, they will still probably be able to survive in the conditions one minute later.
- A fairly small amount of damage will have been

caused by a fire three minutes after ignition. Only another “12 units” of damage will have been caused one minute later.

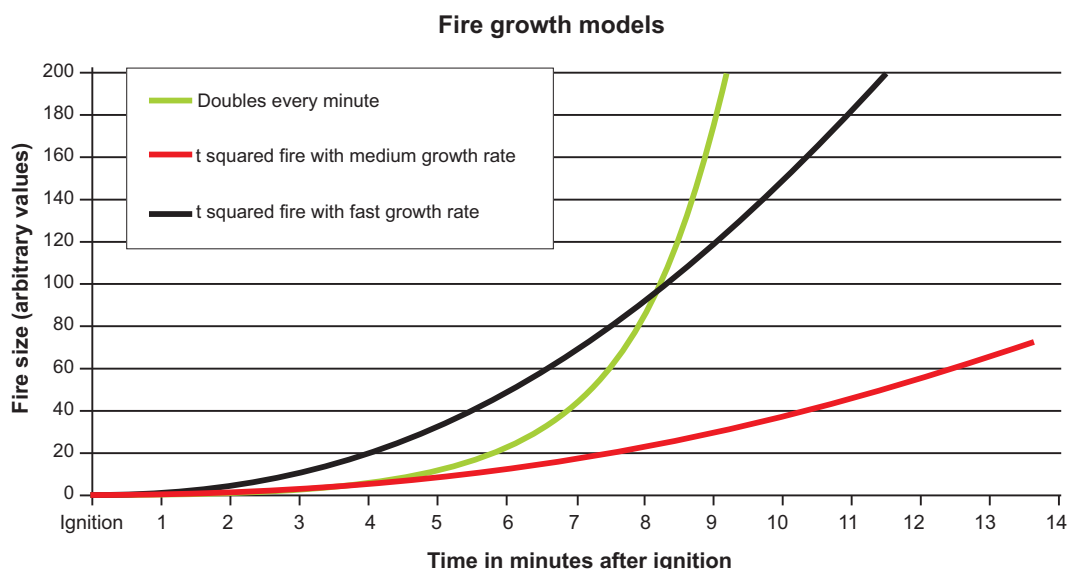
- Three minutes after ignition, a fire will be so small that a fire crew could easily put it out with a hose reel. One minute later, the fire will not be much bigger and the fire crew could still put it out with a hose reel.

But:

- If a person has survived near to a fire for nine minutes, one minute later the fire could have increased in size by such an extent that they will be killed.
- Quite a lot of damage will have been caused by a fire nine minutes after ignition. But another “42 units” of damage will have been caused one minute later.
- And even more seriously, nine minutes after ignition a fire might still just be small enough for the first crew in attendance to put out with a hose reel. One minute later, the fire could have grown by so much that it can’t be extinguished until another crew arrives and more complex firefighting systems can be set up.

What this means is that the injury and damage caused by the 10-minute attendance time is not just “one minute worse” than that caused by a nine-minute attendance time, it could be many times more than that (see Figure 3.2).

Figure 3.1: Graphical representations of fire growth





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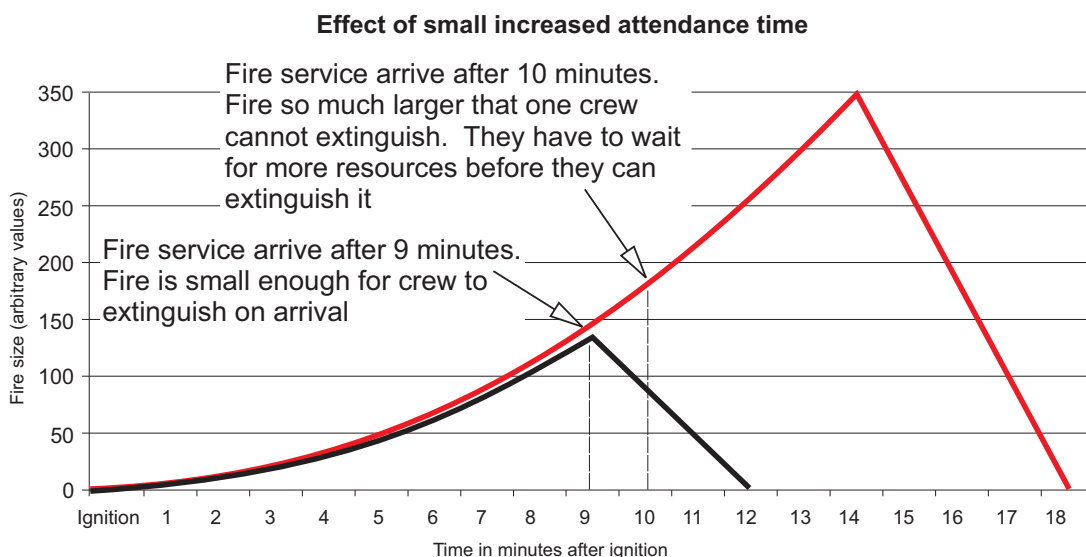
Worse still, when we are talking about fires inside buildings, the turning point of a fire is "flashover" – the moment when a localised fire becomes so big that it ignites everything in the room that is flammable.

It is very unlikely that this will happen three minutes after ignition, and it is virtually equally unlikely that it will happen four minutes after ignition. But while it may have already happened nine minutes after ignition, it is significantly more likely that it will happen 10 minutes after ignition.

Obviously, all of the above is a broad generalisation and is not applicable to every fire. Nonetheless it is true on average that in the early stages of a fire a minute or two makes little difference, but in the later stages a minute or two can make the difference between life and death. It can make the difference between a loss of thousands of pounds and a loss of hundreds of thousands of pounds. It can make the difference between a fire that can be extinguished in relative safety and a fire that requires considerable resources to deal with safely.

This is why in days gone by, everyone in the fire and rescue service knew the phrase "seconds count". This is why the Fire Brigades Union says: **It's about time.**

Figure 3.2: Effect of small increased attendance time



Supporting evidence from Entec

Entec reports *National Risk Assessment of Dwellings* (1996) and *Response Time Fatality Relationships for Dwelling Fires* (1998) indicated that the probability of fire death was linked to attendance time of fire appliances. If appliances could attend in less than five minutes, the probability of death was 3.8 per hundred fires. If appliances took six to 10 minutes to attend a fire, the probability of death was 4.2 per hundred fires (see Figure 3.3).

The implication is clear: beyond five minutes, any increase in attendance time means an increase in the probability of fire death.

When the Entec work was undertaken, the old national standards of fire cover were in force. The report considered the risk areas A to D and remote rural and calculated the effects of increasing average response times by five minutes and decreasing average response times by five minutes in each risk area.

The results were:

- There would be a 20% increase in the number of fire-related deaths per annum, 115 additional deaths, with a five-minute increase in attendance time (slower) nationwide.
- There would be 7% decrease in the number of fire-related deaths nationwide per annum, 39 lives saved, with a five-minute reduction in attendance times (faster).

Road traffic collisions (RTCs)

The Greenstreet Berman/CLG report, *Review of Fire and Rescue Service response times Fire Research Series 1/2009*, contained data on response times at road traffic collisions (RTCs).

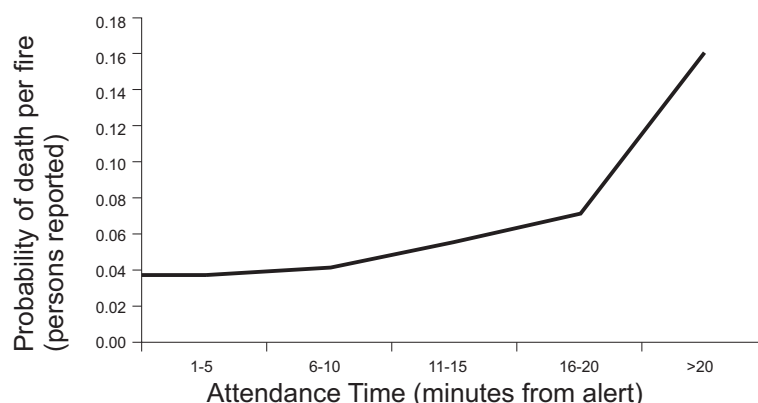
It made the point that data is not available at a national level regarding the number of deaths in RTCs attended by fire and rescue services, so it relied on data from ten services provided specifically for the study. Although not sufficient to be confident about the response time trends nationally, the report stated that for the 10 fire and rescue services that provided data, there was a 10% increase.

Using CLG's Fire Service Emergency Cover (FSEC) formula would indicate that a 10% increase in RTC response times translates into a 7% increase in predicted fatalities at RTCs. It stated that an average response of eight minutes has a predicted fatality rate of 0.097 per life risk incident, versus 0.104 for an 8.8 minute response time.

Previous work has estimated that there are about 1,000 fatal RTCs attended by UK FRs. Therefore, a 7% increase would equate to about an extra 70 deaths in the UK per year, or about 65 for England.

However, the report blithely stated: "This does not allow for any improvements in FRs' performance at RTCs or road safety improvements, which may have offset increased response times."

Figure 3.3: Relationship of fire death linked to attendance time of fire appliances (Entec reports)



Firefighters' safety

In 1996, two firefighters were killed attending a house fire in Blaina, South Wales. The FBU and the service as a whole drew many lessons from these deaths. In particular, the FBU criticised Gwent fire service for the predetermined attendance of one pump, taking approximately 8-10 minutes to attend a house fire. In Blaina, the second pump was only dispatched when it was reported a child might have been in the building.

The FBU argued that if the second appliance had been mobilised at the same time as the first pump, breathing apparatus teams would have been in position to assist firefighters immediately following the explosion and may have been able to prevent the backdraught in the first place. Subsequently the Fire and Emergency Cover (Pathfinder) Review confirmed the union's view that a minimum of nine firefighters was needed to carry out operations safely in such a scenario.

In 2005, two firefighters were killed at a tower block fire in Harrow Court, Stevenage in Hertfordshire. The FBU investigation found that

insufficient firefighters were mobilised initially to enable safe systems of work to be implemented in full. Although response times were not a major issue, the FBU report found that 13 firefighters in the initial attendance for high-rise incidents was the minimum necessary to ensure firefighter safety. The FBU's report *In the Line of Duty* analysed recent trends in firefighter fatalities and the lessons drawn from this and other fatalities.⁸

There has been an appalling upsurge in firefighter deaths in recent years, which the FBU attributes to the so-called "modernisation" approach of downgrading emergency intervention. Response times and weight of attack may not have been a critical factor in each of the recent firefighter deaths. However, many in the service believe that slower responses of the first appliance and of subsequent support resources are detrimentally affecting the safety of firefighters and are increasing the likelihood of accident and injury. They are an "accident waiting to happen". Clearly, the longer a fire goes on and the more it gets out of hand, the greater the risk of firefighter injury or death.

3.2 Homes and workplaces

While saving lives is the overwhelming priority in emergency response, the impact of fire on people's homes and workplaces is also important. It is widely recognised that longer response times also mean greater damage to property – with significant costs to families and businesses and to the economy as a whole.

The authors of the 2009 Greenstreet Berman/CLG report used the Fire Service Emergency Cover (FSEC) model to estimate that increases in fire service response times had already caused £85m of additional loss for 2006 in "other buildings fires".

Using real data provided by the Association of British Insurers (ABI) rather than a fire cover computer model, the Greenstreet Berman/CLG report also calculated that increases in fire service response times had already caused £307m of additional loss.

What is more, the report found a "strong correlation" between average loss per fire and response times.

It is interesting to note that while the Audit Commission wants English fire and rescue services to cut frontline provision even further to save £200m, the cuts that have already taken place are costing the country over £300m (according to Greenstreet Berman/CLG).

With all the talk about cuts to public services, has anyone asked the public whether they think it is a good idea for the country to save £200m by cutting the fire service – and then paying for that decision many times over in lost business, lost employment, building damage, higher insurance premiums and increased commodity prices?

⁸FBU, *In the Line of Duty*, (2008) http://www.fbu.org.uk/campaigns/fatalities/fbu_fatalities_report.pdf



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Insurance costs spiralling upwards

The insurance industry has also seen a much larger real-terms rise in insured losses. The Association of British Insurers (ABI) report Tackling Fire: A Call for Action (December 2009) stated that "the number of fires has been falling, but the cost of these has been increasing: the average cost of fire claims more than doubled between 2002 and 2008".⁹

The ABI's analysis of fire trends showed:

- Fire damage claims in the first half of 2009 cost £639m – £3.6m each day. This follows on from the £1.3bn fire losses in 2008, a 16% rise on 2007 and the most expensive year ever.
- Between 2002 and 2008 the cost of the average fire claim for both commercial and domestic fires doubled to £21,000 and £8,000 respectively.

- Arson, which tends to increase during a recession, accounts for half of all commercial fires. Socially deprived areas and schools are especially vulnerable: arson rates are 30 times higher in poorer areas. Twenty schools a week suffer an arson attack, disrupting the education of 90,000 schoolchildren, causing damage costing £65m.
- More open-plan buildings, which allow more rapid spread of fire, and the increase in out-of-town developments, where fires can go for longer unnoticed, are among factors contributing to the doubling of fire costs since 2002.

The ABI identified reviewing the case for making sprinklers mandatory in all new buildings, and a zero tolerance approach to arson, as two key areas of work. But it too highlighted slower response times as a factor in increasing costs.



PA PHOTOS

⁹Association of British Insurers, Tackling Fire: A Call for Action (2009)
http://www.abi.org.uk/Publications/ABI_Publications_Tackling_Fire_A_call_for_action_bfa.aspx

3.3 The environment

The impact of fire on the environment has long been recognised. There has been renewed interest in the issue in recent years, because even a small fire can produce substantial carbon emissions, contributing to global climate change. Fires in the UK release around two million tonnes of carbon dioxide into the atmosphere every year.

The urban environment

Urban fires can blight the built environment for a long time. Wheelie bin fires illustrate the point. It is true that wheelie bins contain rubbish. It is true that once a wheelie bin catches fire, it cannot be saved no matter how quickly the fire is extinguished. However:

- Early firefighting might stop the fire from spreading to other wheelie bins, and wheelie bins retail at about £60.
- Early firefighting reduces the damage that is caused to ground surfaces by molten plastic that scars an area and marks it out as a sign of urban decay.
- Early firefighting reduces the amount of carbon dioxide and other pollutants generated by a burning plastic wheelie bin. Many fire and rescue services claim they have a strategy to “safeguard the environment”.
- While waiting for the fire service to arrive, people will try to control and extinguish fires themselves, putting their safety at risk.
- Wheelie bins themselves burn ferociously when water hits the molten plastic, and they can contain aerosol cans and other materials that are hazardous in fire.

During South Yorkshire’s trial of a “CAT 2 vehicle”, fire control was instructed to find out from the caller whether the “category 2 fire” such as in a wheelie bin was near “property”. If so, a major pumping appliance was mobilised rather than the CAT 2 vehicle. But “near” is a matter of judgement. The authority was playing Russian roulette.

According to the *Barnsley Chronicle*, South Yorkshire “fire bosses” were forced to “apologise unreservedly” after exactly such a mistake was made. The caller’s concept

of “near” did not take full account of fire dynamics, so SYFRS dispatched the CAT 2 vehicle on a 28-mile drive instead of sending the nearest pumping appliance. By the time the CAT 2 vehicle arrived, the fire had spread to a building.

So wheelie bins might be full of rubbish and impossible to save once they are on fire, but there are many reasons why it makes sense to deal with wheelie bin fires (and other “category 2 fires”) with some sense of urgency. Admittedly the risks and consequences of small outdoor fires are not great, but they are real. Combined together they amount to more than the “next to nothing” that it would cost to eliminate them completely by putting fires out using the nearest available fire appliance.

The rural environment

In 2007 grassland fires accounted for 20% of the total primary and secondary fires. However in 2003 they accounted for 30% of these fires and 38% of these fires in 1995. The latest Fire Statistics UK report (for 2007, but only published in August 2009) pointed out that “grassland fires in July were unusually low, this may be attributable to particularly high levels of rainfall for July across the UK in 2007”.

In 2008 CLG published guidance (England only) on risk assessment tools for Integrated Risk Management Planning (IRMP), which included specific sections on wildfires. The guidance (Fire Research Series 5/2008) highlighted a “growing interest in the assessment of wildfire for a number of reasons”, including:

- Scotland has the potential for larger scale fires although lowland heathland-type fires do present particular risks in England and Wales;
- a perception that more remote locations need better protection (prevention) because it is difficult for tenders to arrive in time to put out fires;
- recognition that wildfires can have a significant impact, particularly where there are consequential impacts such as closure of motorways – a fire near the Thames crossing which closed the M25 is cited as an example of the consequential risk of wildfires;
- a view that wildfire does have an economic and social cost (farmer, estate management, wildlife, consequential, environmental, nuisance concern) and an impact on firefighters;

- the view that climate change will lead to longer and drier summers (and hence more fires and larger fires); and
- the potential for increased cost of retained fire cover and demand for permanent fire cover in the event that climate change leads to more fires.

It noted: "The potential for increased cost of fire cover, in the event of climate change leading to more fires, was said by FRS respondents to be prompting a shift of focus from response to prevention." The guidance stated that there were "a number of key decisions" that needed to be made in relation to

wildfire, including the better use of fire cover.

Scotland is currently addressing operation guidance specific to wildfires. This will include reference to response.

The FBU believes that longer response times mean grassland, heathland and moorland fires will burn areas of natural beauty, scarring the landscape and engulfing property and crops. It is the business of the fire and rescue service, like all sectors, to play its part in protecting the environment. Our own and future generations depend on it.



PHOTOSHOT

4. Conclusions

4.1 The case for national standards

Prior to 2003, there were national guidelines on standards of fire cover (see Appendix 2). These meant that wherever you were in the country, if you called the fire and rescue service to report a fire, a fire engine would arrive within a given period of time.

More importantly, these guidelines were universally treated as national minimum standards. Firefighters and fire and rescue services prided themselves on saving seconds wherever possible and arriving at fires well inside the minimum standard time.

The performance of fire and rescue services was measured against how frequently they achieved the national minimum standards of fire cover.

In 1995 the Audit Commission published a document called *In the Line of Fire*. One of its main subjects was the suitability of the old national standards of fire cover. Part of the argument was that fire appliances

and crews should deliberately be distributed in order to deliver the objectives of saving life and preventing damage (rather than leaving it to fortunate coincidence).

Then the Audit Commission said it wanted the old national standards to be replaced by new national standards of fire cover – based on risk instead of building density and subject to external inspection. In 1995 the Audit Commission view was that: "The principle that there should be a national standard to ensure that there is an adequate service across the country is sound." (*In the Line of Fire*: §31)

End the postcode lottery

There has been enormous "mission creep" over the last 15 years away from the concept of national standards. The FBU believes this has led to a postcode lottery of local standards (see Appendix 1 for variation in recent years).

National standards in Wales

On 21 March 2006, the Welsh Assembly government informed the three Welsh fire and rescue services of the adoption of a new attendance time standard, entitled "Service delivery standard to fires in the home". The circular stated:

"Although the FRAs [fire and rescue authorities] need to place a greater emphasis on preventing fires from occurring in the first place, the need for an effective response to those emergency incidents that do occur or are anticipated is not diminished...

"The Service Standard for attendance to fires in the home has been developed based upon a comprehensive model which considers population (numbers of people), population density (dealing with remoteness) and population type (risk of fire).

"This Service Standard aims to provide 80% of Welsh homes with an attendance to a fire in the home within 10 minutes. The Service Standard also recognises that as a result of local population numbers, population density and

population types some areas will attract a 5-minute attendance to a fire in the home. The deciding factor for the introduction of the 5-minute attendance would be where the Fire Service Emergency Cover (FSEC) computer models predicts a casualty rate greater than 6.

"Additionally, where areas are classified by FSEC as above average risk each FRA will need to assess individual risk and needs. Where these areas exist each FRA must implement an additional form of risk reduction strategy that complements this Service Standard. It is in this area of risk reduction that FRAs are encouraged to develop innovative risk reduction strategies."

While the FBU might seek to improve on the service standard in Wales, it is significant that the Welsh Assembly government agreed in principle with a national standard covering all three services in Wales. If such an approach is possible in Wales, it must be possible across the whole of the UK.

Service standards to fires in the home, Circular W-FRSC(06)08.
<http://wales.gov.uk/dsjlg/publications/fire/0608/circular?lang=en>

The fire and rescue service is a function of local government, so each local service is independent of the others. Since the abolition of national standards and the introduction of Integrated Risk Management Plans (IRMP), fire and rescue services have had the freedom to develop their own standards of emergency cover and have developed completely different standards. The overall national coherence has been lost.

The FBU believes that while most members of the public are aware that fire and rescue services are delivered locally, they still have a concept of the fire and rescue service as being a national service that should be delivered in a uniform fashion. A failure of one local fire and rescue service to deliver a reasonable standard will reflect badly on the whole service, to the detriment of all. For firefighters this represents both a threat to the service provided to our communities and to the reputation of the firefighting profession. In any case, public expectations are that a broadly similar level of service will be provided in all parts of the UK. In the public debate on health provision there is strong opposition to the idea of a postcode lottery. The FBU believes that similar expectations are perfectly justified in relation to the fire and rescue service.

4.2 What should national standards be based on?

It is true that under the old national standards of fire cover the level of service the public received from its fire brigade depended on where you lived. However, whilst there was different service provision between town and country, there was a levelling effect. Cities and villages had different standards of fire cover, but broadly every city had the same standard of service as

each other, and broadly every village had the same standard of service as other villages. That there should be national standards in public service is, the FBU believes, beyond question. We believe this is the public expectation.

If as at present there is no national standard for fire and rescue services in England and Scotland, are we to understand that this ethos should be applied to other public services? So that, for example, schools would not need to meet a certain standard? Or that hospitals work to some unique criteria that they set themselves? In public debates on the health service there is a great hostility to the idea of a postcode lottery. Yet in fire and rescue service policy this enormous local variation is positively encouraged. The FBU believes it is high time to challenge this.

Fire causes death, injury, loss of property, loss of buildings, loss of employment and loss of business. The earlier the arrival of the fire service to an incident with the correct resources to deal with it, the more that deaths and injury will be prevented and the more the losses can be reduced. Yet we have witnessed a worsening of response standards across the UK and a worsening of the targets fire and rescue services set themselves since they were given the opportunity, to a large extent, to self-govern.

It would be utopian to call for a fire station on every street corner. The FBU has never made such a demand. The union has unapologetically demanded, campaigned for and fought for the maintenance of existing fire resources and improvement to those resources.

The previous national standards addressed two factors which affected the ability of firefighters to deal with emergency incidents safely, efficiently and effectively. These were: the number of appliances and the speed

Number of appliances

Appendix 2 of this publication details the 1985 response (attendance) times which were published by the Home Office in FRS Circular 4/1985. A simplified representation of this is:

Risk category Special risk	1st appliance PDA (predetermined attendance)	2nd appliance	3rd appliance
A	5	5	8
B	5	8	
C	8-10		
D	20		

with which they should attend an incident; and the number of firefighters available on each appliance.

Number of firefighters

The 1985 standards of fire cover were enhanced by the expectation that the first appliance to arrive at an incident should have a crew of five on at least 75% of occasions.

As with the 1985 standards of fire cover, the FBU does not regard this “75% confidence level” as the ideal solution. Riding with a crew of four on up to 25% of occasions exposed firefighters to heightened risk over the course of their careers, and it would have been better to have a crew of five on 100% of occasions.

And yet, under the banner of IRMP, many fire and rescue services are not even attempting to achieve a crew of five on 75% of occasions, while some are proposing to use risk assessment to justify riding with a crew of four all the time. This is despite the fact that the Management of Health and Safety at Work Regulations state: “Where established industry practices result in high levels of health and safety, risk assessment should not be used to justify reducing current control measures.”

4.3 Risk-assessed resource planning

When the IRMP process was introduced, the Office of the Deputy Prime Minister produced guidance notes, the contents of which fire and rescue services had to consider. It also provided a software tool known as the FSEC (Fire Services Emergency Cover) toolkit.

Essentially, the guidance notes required fire and rescue services to assess the risks within their geographical area and provide plans to ensure that in the event of a fire sufficient firefighters and equipment arrive in time to implement firefighting procedures to protect life and property whilst not exposing firefighters to undue risk. This is risk-assessed “response planning”.

In order to determine the “weight” of response to incidents – i.e. the number of firefighters who should be sent to an incident in order to deal with it effectively and safely – fire and rescue services should

break down the tasks that need to be carried out in what sequence (including the carrying out of tasks simultaneously) and how many firefighters are required to undertake those tasks. In undertaking this evaluation of tasks, fire and rescue services should also ensure that the tasks are planned in such a way as to reduce risks to the firefighters carrying them out. In short, authorities are required to carry out a detailed risk and task analysis. Few, if any, have done so adequately.

Before FSEC was rolled out across the country, it was tested in a number of so-called “Pathfinder brigades”. As part of this testing process, a range of what were termed Worst Case Planning Scenarios (WCPS) were developed for 35 incident types. By considering the actual situation firefighters are faced with at emergency incidents, the WCPS methodology was intended to determine the resources that were needed to deal with emergency incidents effectively and to reduce the risks to firefighters.

In 2004, the Fire Brigades Union undertook the job of carrying out the risk and task analysis of the typical fire scenarios which were known as the Critical Attendance Standard (or CAST) scenarios. This work was carried out by union officials, all of whom are or have been very experienced firefighters or officers and was undertaken with the assistance of the professionals in the fire service – the staff. The CAST scenarios remain entirely valid now and are expected to remain so in the foreseeable future¹⁰.

It is essential that any response standard is robust and that it does not conceal “unseen” factors. All response standards must start from the time that the fire and rescue service control room receives the initial call. Not to do so would mean that the standard was misleading. The public will expect that the fire appliance will arrive in a given time from when the call was made not from when the crew were notified of the call.

In order to provide assurance to the public and to ensure that there is proper audit of our vital service, there must be a rigorous process by which response time standards including the handling time within the emergency fire control room is measured and performance assessed.

¹⁰The FBU report, *Review of emergency planning at major hazard sites* (2007), by Arthur Little consultants criticised planning for major incidents.

4.4 For national standards

The FBU believes that each country within the UK should adopt a national standard. Those national standards should naturally be very similar, because if you feed the same information into an equation you should get the same results out. Currently IRMPs can and do produce radically different results.

In setting standards, governments should start from the principle of providing genuine and progressive improvement in the service provided to the public. Delivery of our emergency service is primarily dependent upon the principle of the right number of properly trained firefighters attending an incident with the right equipment as early as possible after it occurs, in order to make an early intervention to stabilise and resolve the incident using the appropriate safe operational procedures.

The emergency planning process within the fire and rescue service must also include ensuring there are adequate resources (firefighters, control staff, appliances and equipment) to enable fires and other emergency incidents to be tackled safely and professionally. The first intervention in any emergency incident will be the receipt of a call for assistance by fire control. National standards must ensure adequate firefighters and control staff on duty to answer such emergency calls. There should also be continued assessment against rigorous performance standards for receipt and mobilisation of calls by emergency fire controls.

To this end, fire and rescue services must ensure that they are genuinely improving on the standards that existed prior to the changes in the legislation, the abolition of national standards and the introduction of IRMP. Any such process must obviously include the full involvement of professional firefighters and their professional organisation – the Fire Brigades Union.

This means ensuring all the following issues are addressed and that steps are taken to progressively improve on the provision of the fire and rescue service in relation to:

- the standard of training;
- the readily available number of personnel and appliances;
- the operational procedures;

- the time taken to mobilise the crews from receipt of initial call;
- the time taken by crews to attend the incident from time of mobilisation;
- the number of firefighters deployed to an incident sufficient to deal with that incident safely, effectively and efficiently; and
- the standard and availability of equipment.

Fire and rescue services should regularly monitor their performance to address each of the above areas. They should maintain records and ensure procedures are in place so that the fire and rescue service, fire service stakeholders, auditors and inspectors and members of the public can readily assess the progress being made.

Given the significance of response times as an indicator of the outcome of incidents and the importance many stakeholders place on rapid response times, publicising them as a performance measure would be an obvious step to take. Measurement of performance is now easy to achieve. Two years ago an electronic recording system (IRS) was introduced that has the ability to record all details of emergency response. Fire and rescue services could provide almost “instant access” on attendance times right down to the local area – at almost no cost.

These principles must underpin a national standard. In the absence of such a standard by all governments across the UK, these principles should be incorporated into IRMPs of the individual fire and rescue services.

4.5 It's not just about time

The FBU believes that the changes made in recent years have fragmented the fire and rescue service. Different standards are set in every single service about the response provided to the public. Each service sets its own standards of training. We see new initiatives introduced without any thorough assessment of their value or use.

And behind all this lies the drive to save money. Rather than looking at how firefighters can deliver the best possible service to the public, the agenda is how much money can be saved. The long-term threat is to undermine the whole ethos of teamwork and public service that lies behind firefighting.

The ideology of “modernisation” is based on introducing private sector techniques into the public services. And the truth is that behind that lies a deep hostility to the very idea of public service. Some of this thinking is seen in the fire and rescue service today with the increased emphasis on “leadership” and with the very significant pay rises for the most senior managers – on the basis of driving through “modernisation”, i.e. achieving cost-cutting and job-cutting measures and targets.

However, these reforms have excluded two key groups of people: firefighters and the public. Each fire and rescue authority is required to consult the public over its plans for emergency cover. Everyone knows that the consultations are generally a complete farce whereby the public oppose further cuts and then are subsequently ignored. This raises a further question about the deficit of democratic control.

If politicians bothered to ask a sample of members of the public what their priorities for the fire and rescue service should be, the FBU is confident about the likely top issue. People want to be sure that when they dial 999 they get fire engines and firefighters there as quickly as possible. They hope it will never happen but when it does they want to be sure that the service will deliver. Firefighters would agree completely.

The FBU wants to build alliances between firefighters and the public. This has been done remarkably well in many local campaigns. We have seen communities fight with great tenacity to protect their fire stations and we work hand in hand with them. We need to find ways to develop such alliances and take them forward. Fighting to maintain and improve the fire and rescue service is a role that the FBU will not abandon – and we will work with other stakeholders to develop robust standards for service performance.



Appendices

Note: These figures do not include earlier increases in response times, which have been substantial in some areas. In England overall, between 1996 and 2006, response times increased by 18%.

i) Average response times in dwelling fires^(1,2) by country and FRS area, UK, 2006-2008p

Appendix 1: Average response times in dwelling fires by country and FRS area, UK, 2006-2008						
FRS area	2006		2007		2008p	
	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.
UNITED KINGDOM	6.56	5.59	6.60	5.67	6.72	5.80
ENGLAND + WALES	6.55	5.59	6.60	5.67	6.76	5.80
ENGLAND	6.49	5.54	6.56	5.64	6.71	5.77
ENGLAND Non-Met Counties	7.13	6.25	7.18	6.29	7.22	6.30
Avon	6.90	5.84	7.17	6.06	7.02	5.91
Bedfordshire	6.42	6.30	6.59	6.46	6.23	6.12
Berkshire	6.95	5.91	7.11	6.02	7.47	6.48
Buckinghamshire	8.35	7.30	7.97	7.06	8.57	7.34
Cambridgeshire	8.40	7.60	8.49	7.63	8.32	7.56
Cheshire	7.12	6.43	7.05	6.47	6.73	5.96
Cleveland	5.04	4.25	5.09	4.26	5.56	4.69
Cornwall	9.39	9.06	8.79	8.73	8.84	8.65
Cumbria	7.85	7.07	7.61	6.83	8.10	7.27
Derbyshire	7.06	6.61	7.27	6.86	7.36	6.87
Devon	6.77	6.61	—	—	—	—
Devon and Somerset ⁽³⁾	—	—	7.17	6.77	7.14	6.84
Dorset	7.39	4.39	7.86	4.41	7.58	4.59
Durham	7.37	6.70	7.37	6.69	7.63	6.70
East Sussex	5.94	5.53	6.15	5.71	6.42	5.96
Essex	7.48	7.04	6.96	6.54	6.68	6.29
Gloucestershire	8.13	7.09	8.60	7.46	8.56	7.64
Hampshire	6.69	5.24	6.63	4.63	6.75	4.72
Hereford & Worcester	7.50	6.99	8.02	7.33	8.62	7.53
Hertfordshire	6.45	4.46	6.57	4.54	6.23	4.37

FRS area	2006		2007		2008p	
	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.
Humberside	5.77	5.34	6.18	5.33	6.09	5.23
Isle of Wight	7.08	6.93	8.40	8.25	6.95	6.82
Kent	6.16	5.38	6.62	5.80	6.65	5.80
Lancashire	6.22	5.27	6.17	5.19	6.55	5.38
Leicestershire	6.94	6.78	6.18	6.00	6.53	6.34
Lincolnshire	8.82	8.09	8.92	8.24	9.09	8.27
Norfolk	7.82	6.87	7.75	6.97	7.94	7.15
North Yorkshire	7.84	7.42	7.81	7.59	8.20	7.93
Northamptonshire	6.98	6.63	6.77	6.38	7.26	6.88
Northumberland	7.46	5.80	8.22	7.15	7.07	5.93
Nottinghamshire	5.68	5.05	6.01	5.34	5.92	5.17
Oxfordshire	8.20	7.09	8.46	7.42	8.34	7.38
Shropshire	8.05	6.02	7.76	5.87	8.38	6.12
Somerset	8.77	6.07	—	—	—	—
Staffordshire	8.07	7.22	7.52	6.74	8.04	7.32
Suffolk	8.59	7.52	8.82	7.82	8.58	7.69
Surrey	7.92	6.96	7.97	6.97	7.84	6.83
Warwickshire	7.13	4.83	6.05	3.89	—	—
West Sussex	8.09	6.76	8.57	6.42	8.41	6.89
Wiltshire	9.08	7.98	8.83	7.79	9.04	7.95
Isles of Scilly	7.17	7.00	7.00	7.00	10.00	9.00
ENGLAND Met Counties	5.87	4.85	5.97	5.01	6.18	5.21
Greater Manchester	6.19	4.93	6.36	5.06	6.48	5.12
Merseyside	5.83	4.86	5.64	4.74	5.76	4.76
South Yorkshire	6.42	5.38	6.52	5.46	6.71	5.64
Tyne & Wear	5.11	4.65	5.12	4.69	5.12	4.71
West Midlands	5.92	5.38	5.89	5.31	6.26	5.48
West Yorkshire	6.28	5.34	6.29	5.42	6.34	5.47
Greater London	5.42	4.02	5.58	4.37	5.76	4.84

FRS area	2006		2007		2008p	
	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.	First call to attend.	Mobl. to attend.
WALES	8.10	6.93	7.76	6.71	8.09	6.81
North Wales	9.51	8.33	9.34	8.34	9.19	8.11
Mid and West Wales	8.76	7.62	8.28	7.22	8.94	7.32
South Wales	6.96	5.79	6.56	5.48	6.77	5.63
N. IRELAND	7.73	6.03	7.74	5.96	8.19	6.44
SCOTLAND	6.43	5.52	6.42	5.56	6.48	5.57
Strathclyde	6.29	5.47	6.29	5.51	6.36	5.53
Highland and Islands	9.55	8.49	10.04	8.64	9.51	8.06
Grampian	6.59	5.71	6.95	6.07	6.78	5.94
Tayside	6.38	5.39	6.69	5.69	6.59	5.62
Lothian & Borders	6.04	5.22	5.96	5.14	6.31	5.50
Fife	6.66	5.77	6.45	5.61	6.55	5.24
Central	6.97	5.79	6.28	5.22	6.41	5.17
Dumfries	8.20	4.23	10.38	6.13	9.53	5.35

(1) Excluding late call and heat and smoke damage only incidents

(2) Incidents with a response time greater than 59 minutes are excluded as response time data may be incorrect and will therefore skew the averages.

(3) From 1st April 2007, Devon and Somerset FRSs merged to become Devon and Somerset FRS

Ref: 2010018(06-08).sas 04MAR10 Source: DCLG

Source: Hansard, 22 March 2010 (6W)

<http://www.publications.parliament.uk/pa/cm200910/cmhansrd/chan61.pdf>

Appendix 2: Previous National Standards of Fire Cover

Risk Category	Examples	Recommended attendance standards
A	Main shopping and business centres, concentrations of theatres, cinemas and other entertainment centres, or of a high-risk industrial property.	3 appliances: 2 in 5 minutes 1 in 8 minutes
B	Smaller scale shopping and business areas, concentrations of hotels and leisure facilities in large resorts, concentrations of older multi-storey residential accommodation and industrial and trading estates with some higher risk buildings.	2 appliances: 1 in 5 minutes 1 in 8 minutes
C	Post-war housing developments such as terraced and multi-storey dwellings, deck access and blocks of flats or areas of suburban terraced, semi-detached and detached residential properties.	1 appliance: 1 in 8 to 10 minutes
D	Category D risk includes all areas other than remote rural not falling within categories A to C.	1 appliance: 1 in 20 minutes
Remote rural	Remote rural areas may be classified as remote rural if they are isolated from centres of population and contain few buildings.	No attendance standard
Special risks	A subsidiary risk classification for small areas, whether comprising single buildings or complexes, which need a first attendance over and above that appropriate to the risk which predominates in the surrounding area. There are many different types of special risks, but some typical examples include hospitals, prisons, airports, tower blocks and major petrochemical plants.	As appropriate to building, rather than to the risk which predominates in the surrounding area

**Appendix 3: Simplified draft national fire cover guidelines for protection of life from fire in dwellings.
From Entec, 23 May 1997**

Life risk category	Minimum required to avoid intolerable risk ¹	Minimum required for risk to be tolerable ²	Standard warranted to reduce risk as low as reasonable practicable	
			Minimum number of people	Standard
Very high risk	Not possible by fire cover alone	Not possible by fire cover alone	Over 6,000	2 in 10 (w/t)
			4,000 to 6,000	1 in 10 (w/t)
			1,000 to 4,000	1 in 15 (retained)
High risk	Not possible by fire cover alone	Not possible by fire cover alone	Over 20,000	2 in 10 (w/t)
			10,000 to 20,000	1 in 10 (w/t)
			1,000 to 10,000	1 or 2 in 15 (retained)
Medium risk	15	Not possible by fire cover alone	Over 80,000	2 in 10 (w/t)
			40,000 to 80,000	1 in 10 (w/t)
			20,000 to 40,000	1 in 10 (day or night crew plus retained)
			2,500 to 20,000	1 in 10 (retained)
			2,500 dispersed	1 in 20 (retained)
			<2,500	no standard at present costs
Low risk	20 to 40	20	100,000 or more	1 in 10 (w/t)
			9,000 or more	1 in 10 (retained)
			9,000 dispersed	1 in 20 (retained)
			<9,000	no standard at present costs

¹ Intolerable risk equates to a risk of death twice that of the rate of death from fire for the UK population as a whole, i.e. the highest rate of death in a region of the UK in the 1990s.

² Tolerable risk is taken to equate to the average risk of death from fire across the whole UK population.



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