Fire Brigades Union

Campaigning for Firefighters and Emergency Fire Control Staff

Merseyside Fire Brigades Union

“What are we waiting 4 ?”

Safety concerns regarding MF&RS policy of a default ridership level of 4 and 4

August 2010

Merseyside Fire Brigades Union is committed to serve the interests of our members as professionally and as resolutely as is possible.

We strive to ensure our members are as best equipped as possible to do the strenuous and dangerous job they are required to do. We are as committed to ensure our members provide the very best fire and rescue service to the communities we serve.

This booklet aims to provide accurate information and comment on the subject of riding with crewing levels of four firefighters on frontline emergency fire appliances.

Executive Summary

The Fire Brigades Union and Merseyside Fire and Rescue Authority have previously reached agreement in relation to crewing levels, these collective agreements are signed by the employers and employees joint secretaries. The Fire Brigades Union simply ask that these agreements are abided by.

This document contains the following fundamentally important points that the FBU ask is considered by the reader:

"When it comes to changing the number of fire engines you've got or how you crew them, you do have to underpin that with very, very robust evidence before you do it."

(DCFO Mike Hagen, Audit Commission Case Study 4, Seeing the light: innovation in local public services May 2007)

"An important underpinning principle, however, is that there must be adequate evidence to support and justify any changes proposed, ensuring the maintenance and improvement in community safety"

(The ODPM 'IRMP Guidance note 1 final version)

3.4 ……For these reasons, you will be expected to consult about any changes in the provision of appliances and crews.'

(The ODPM 'IRMP Guidance note 2)

"Fire and rescue services will need to provide evidence that the planned response is safe and appropriate. This is likely to involve carrying out detailed risk and task analysis of the planning scenarios"

(The ODPM 'Preparation for the Fire Service, Emergency Cover Toolkit)

'*This arrangement is sufficient to provide a default level of four riders per appliance at an incident; a level agreed by the Fire and Rescue Authority following an extensive risk assessment.'*

(Audit Commission Report 'Rising to the Challenge')

Merseyside Fire Brigades Union can confirm that it has never received a copy of any such extensive risk assessment so no consultation could ever take place on this incredibly important issue.

Introduction

It is important to note that The Fire Brigades Union are not asking the Fire Authority to overturn any decision that they have already made, the Collective Agreements signed on behalf of the Fire Authority in October 2006, June 2009 and July 2009 by the Employers Joint Secretary, ACFO Evans, are entirely adequate in meeting the concerns that the Fire Brigades Union have over a policy shift to a default ridership level of 4 and 4 on front-line appliances, what we ask is that the Fire Authorities collective agreements signed by both sides are abided by.

Merseyside Fire Brigades Union has entered into extensive correspondence with Merseyside Fire and Rescue Service management over this issue. Merseyside Fire Brigades Unions' valid concerns over riding 4 and 4, and our belief that the Service has not complied with the statutory requirement for consultation over extensive risk assessments (necessary to implement MF&RSs policy) have been well documented. We do not intend to revisit that documentation here, rather our intent in this document is to inform members of the legislation and the Communities and Local Government (CLG) circulars that we fear the Fire and Rescue Authority could be in breach of, and further to explain in detail the history and the background as to why these Risk Assessments are required to have been undertaken. Risk assessments that to date, despite numerous auditable requests, Merseyside Fire and Rescue Service have failed to provide.

"When it comes to changing the number of fire engines you've got or how you crew them, you do have to underpin that with very, very robust evidence before you do it."

(DCFO Mike Hagen, Audit Commission Case Study 4, Seeing the light: innovation in local public services May 2007)

The Fire Brigades Union would not wish the Fire and Rescue Authority to drift into assent before, through the consultation process, fully exploring all the possible consequences and reports into a crewing level of 4 and 4. The FBU reiterate our belief that this policy poses a very real risk to operational firefighters and will, by firefighters complying with Service Instructions, delay firefighting activities at fires whilst crews await backup.

The FBU in this presentation will further inform Councillors why we believe adopting a policy for crewing levels of 4 and 4 puts firefighters at unnecessary risk, risk that is acknowledged in a range of reports (fully referenced within this presentation), reports that we believe have led the vast majority, if not all, other UK Fire and Rescue Services to remain with crewing levels of 5 and 4 riders, and in some FRS's, such as Strathclyde, who ride with 5+5 riders. The FBU are aware of the financial situation but firmly believe that because operational firefighter numbers have been reduced that consequentially firefighter safety should not also be reduced.

Fire Authorities requirements for consultation, Integrated Risk Management Plans (IRMP)

The Fire Authorities responsibility, and indeed statutory obligation to consult with staff over any changes in the provision of appliances and crews through consultation with their representative bodies, is outlined in a succession of documentation provided to Fire Authorities by the then Office of The Deputy Prime Minister, ODPM (now Communities and Local Government, (CLG)).

The ODPM states *'IRMP Guidance note 1 final version'* in relation to IRMPs that-

"An important underpinning principle, however, is that there must be adequate evidence to support and justify any changes proposed, ensuring the maintenance and improvement in community safety"

The ODPM is very specific in *'IRMP Guidance note 2 final version, 3. Who should be consulted and about what?' stating-*

'3.1 The guiding principle in deciding how extensively you consult is that any person or organization that might have a legitimate interest in the proposals under consideration, or who may be affected by those proposals, should have the opportunity to express their views.

3.2 The scope of the consultation you undertake will be proportionate to the nature and extent of any changes proposed……..Staffing and related issues are usually of lesser importance to the public, but of course are of great importance to employees and their representatives.

3.4 ……For these reasons, you will be expected to consult about any changes in the provision of appliances and crews. '

It is important to note that IRMP Guidance note 2 specifically refers to *'crews'* and not overall staffing which the guidance mentions in 3.2

Office of the Deputy Prime Minister *'Preparation for the Fire Service, Emergency Cover Toolkit' January 2004 -*

"Fire and rescue services will need to provide evidence that the planned response is safe and appropriate. This is likely to involve carrying out detailed r isk and task analysis of the planning scenarios"

"Responsibility for the safety and effectiveness of the planned responses will lie with the fire authority and as such they should be approved at the highest level."

The Fire Brigades Union have not been consulted on moving to a supposed crewing level of 4 and 4. Such consultation would, as per IRMP guidance requires consist of *'….detailed risk and task analysis of the planning scenarios.'* Part of the risk assessment requirement would entail the analysis of the responsibilities and tasks expected of each Firefighter at a range of scenarios, as defined in The Fire Service Training Manual, Standard Operating Procedures and Service Instructions. Where tasks are previously detailed for crews of 5, these scenarios would have to be redefined to incorporate all tasks and requirements for crews attending as a crew of 4 for each type of incident.

Within an Integrated Risk Management Plan (IRMP), local fire & rescue authorities are required to set out how they intend to make adequate provision for prevention and emergency intervention to meet efficiently and safely all normal requirements.

The nationally circulated guide 'The Dynamic Management of Risk at Operational Incidents, A Fire Service Pamphlet' states:-

"Legal

Fire Authorities, in common with other employers, have many legal duties in respect of safety. The most relevant to this document are those imposed by sections 2 and 3 of the Health and Safety at Work Act 1974 and regulations 3 and 4 of the Management of Health and Safety at work Regulations (MHSAW), 1992. These require employers to ensure, so far as is reasonably practicable, the health, safety and welfare of employees and others affected by their work activities.

In order to achieve this, they must carry out and record suitable and sufficient risk assessments, then implement the control measures necessary to ensure an acceptable level of safety. Both the risk assessments and the control measures must be regularly monitored and reviewed to confirm their continuing validity."

Risk Assessment – The Management of Health & Safety at Work Regulations

In the 1990's the manner in which consideration of employee health & safety was approached in the UK underwent a fundamental change. European legislation was enacted which shifted the emphasis from prescriptive requirements to requirements and procedures based on an assessment of risk. The Management of Health & Safety at Work (MHSAW) Regulations placed a requirement on employers to consider all work activities from the perspective of the risk they posed to their employees, and the risk posed to other persons who could be affected by the way their employees were undertaking tasks. It was ruled that fire & rescue authorities (as employers) were not exempt from the requirement to comply with this legislation. This had major implications for the Fire and Rescue Service, particularly in relation to procedures at emergency incidents, where the risks posed to Firefighters were potentially the greatest. Fire & Rescue Service Employers now had to develop Standard Operating Procedures (SOPs); these SOPs have recently evolved in Merseyside F&RS into Service Instructions (SIs), which should ensure that the Service has taken all steps required to actively reduce the risk to a level that was considered as acceptable.

The Chief and Assistant Chief Fire Officers Association (CACFOA), now Chief Fire Officers Association (CFOA) summed up the new health & safety requirement in their 1996 publication *'Guidance on the Application of Risk Assessment in the Fire Service'*, stating that it was now necessary to:

"… define the safety critical support issues for fire service personnel and others …"

(Guidance on the Application of Risk Assessment in the Fire Service – page 6)

The initial Fire & Rescue Service response to this new health & safety requirement was to develop a range of Generic Risk Assessments (GRAs) covering the broad range of risks that Firefighters could routinely expect to encounter at emergency incidents.

The Generic Risk Assessments were grouped into:

rescues (from ice, lifts, sewers, collapsed structures etc);
fighting fires;
incidents involving transport systems (road, rail, air etc);
generic hazards (such as acetylene, electricity, chemical hazards, civil disturbances etc.).

These GRAs were published in 1998 under the title 'A Guide to Operational Risk Assessment'. It was however stressed to fire & rescue authorities at the time that the GRAs simply provided information to inform the authority's own risk assessments and SOPs/SIs for the various incidents which Firefighters could routinely expect to attend, crucially stating that-

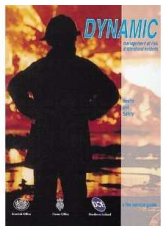
"It is imperative that brigades use these assessments as part of their own risk assessment strategy not as an alternative or substitute to it. They are designed to help brigades assess their own risks, so they should be included in the brigade's normal planning process."
(A Guide to Operational Risk Assessment – page 4)

Crucially *'A Guide to Operational Risk Assessment, Health and Safety, Fire Service Guide Volume 3'* in its 'Fire Service Risk Assessment Summary Sheet, Generic Risk Assessment Summary Sheet (GRA 3.1) Section 3 page 15', lists operational activities in relation to 'Fighting Fires in Buildings' as being considered as High Risk to Firefighters; these include heat and humidity, limited visibility, and uncontrolled ventilation. One of the key 'Control Measures' it lists in relation to these High Risks is the Pre-Determined Attendance (PDA's), clearly the amount of Firefighters on the initial attending fire appliances is taken into account in GRA3.1.

Simply adopting the GRAs alone does not discharge the individual employer's responsibility to carry out a full risk assessment, and to subsequently ensure that the Standard Operating Procedures assessed as being necessary were put in place.

'Dynamic Management of Risk at Operational Incidents guide' is personal issue to all Firefighters in the UK. The guide states as a maxim:

"We may risk our lives a lot, in a highly calculated manner, to protect saveable lives."



This *'highly calculated manner'* refers to the Standard Operating Procedures that are developed and trained against in an attempt to ensure that risk is minimized as far as possible. However to have any real meaning from a risk assessment perspective, SOPs/ SIs have to reflect the **actual situation** (and associated risk) which Firefighters are faced with at operational incidents.

It is these actual situations the Fire Brigades Union believe, when riding 4 and 4, which require separate and sufficient consultation for Risk Assessments to be carried out. Risk Assessments that the Audit Commission in their document 'Rising to the Challenge' state Merseyside Fire and Rescue Service have already carried out.

'

The Audit Commission report contains the case study by MF&RS which states '*This arrangement is sufficient to provide a default level of four riders per appliance at an incident; a level agreed by the Fire and Rescue Authority* ***following an extensive risk assessment***.'

The FBU despite numerous requests have not been provided with a copy of the Risk Assessment and consequently can categorically state that there has been no consultation over this issue. The FBU requested a copy of the Risk Assessment from the Audit Commission, they informed us that they had not seen a copy of the risk assessment themselves but had been informed by MF&RS that it had been carried out. MF&RS's use of 'risk assessment' to justify a crewing level of 4 and 4 is in contravention of the guidance contained in the Health and Safety Executive's *Management of Health and Safety at Work Regulations* which states-

"Where established industry practices result in high levels of health and safety, risk assessment should not be used to justify reducing current control measures"

The Management of Health & Safety at Work Regulations introduced the concept of risk assessment as the planning tool to determine correct Standard Operating Procedures (SOPs). In short, effective Standard Operating Procedures are dependant on accurate risk assessment. Even the casual observer would correctly identify that this risk assessment, by necessity, must include consideration of the number of Firefighters and the type of equipment needed to effectively minimize risk to those Firefighters (the employees) sent to emergency incidents. The Audit Commission Report '*In the Line of Fire'*, written at the same time the MHSAW Regulations came into force in the UK, prompted the *'Review of Standards of Emergency Cover'*. The review considered not only an assessment of risk to the community, but also an assessment of the risks faced by Firefighters attending incidents as part of the emergency response, and critically, an assessment of how to maintain this risk at an acceptable or tolerable level.

Correspondence between CFO McGuirk and The Heath and Safety Executive (HSE) has confirmed The FBUs opinion with regards to consultation issues in that the HSE state (Christina Roberts HM Inspector of Health and Safety, 26th August 2004)

"An important part of the risk assessment process is to give 'relevant and comprehensible' information to employees on the risks to their health and safety identified by the assessment, and the preventive and protective measures to be taken (Regulation 10, Management of Health and Safety at Work Regulations 1999). You also have a duty to consult with safety representatives (Regulation 4A, Safety Representatives and Safety Committees Regulations 1977) or employees where there is no safety representative (Health and Safety (Consultation with Employees) Regulations 1996, Regulation 3).

As well as these legal duties, HSC/E considers that a fully involved and consulted workforce makes a major contribution to achieving a healthier and safer workplace."

In short, if you reduce the number of firefighters on a fire appliance the additional responsibilities/tasks that have to be undertaken by the remaining crew must be specifically trained for and crews informed of the preventative and protective measure that the Service has adopted as a result of its extensive risk assessment. Quite clearly the HSE indicates that there should not be, as a consequence of removing a firefighter from a fire appliance a 'just get on with it' attitude.

Also in further correspondence between the Fire Brigades Union and Ian Phillips, HM Inspector of Health and Safety, 23rd November 2005 states-

"HSE is concerned to ensure that safe systems of work are adopted at incidents, and that where a specific number of personnel are necessary to implement the procedures, they are available. Where the number of personnel is limited, then a different procedure may need to be established, and trained for. Firefighters should always be trained and competent in the safe system of work they employ. HSE also understands that health and safety concerns of firefighters are frequently a consequence of management decisions about standards of fire cover, and would expect risk assessments be updated/reviewed to determine the extent to which crews of less than the recommended standards are able to take action at emergency incidents safely and without significant additional risks to the health and safety of firefighters. Such assessments should be clear about the very real limitations that exist for effective firefighting and rescue action, particularly regarding the numbers of firefighters necessary to conduct BA procedures safely and effectively."

MF&RS Methodology in Relation to a Crewing Level of 4 and 4 and The Fire Brigades Union Detailed Arguments Against Such a Policy.

A basic premise of MF&RS is that:

It has been accepted in the past that it is reasonable to crew appliances with 4 people on up to 25% of occasions, therefore it must be reasonable (and therefore safe and operationally efficient) to crew appliances with 4 people on all occasions.

Risk management is not a black and white issue. There are *degrees of suitability* when it comes to the control measures that need to be put in place to address a risk. See Figure 1

There are a multitude of operational circumstances where riding an appliance with a crew of 3 riders would be inadequate to ensure crew safety and to successfully execute operational activities.

Crewing appliances with 4 people gives the fire and rescue service (FRS) the opportunity to achieve its operational objectives while ensuring a degree of crew safety.

Crewing appliances with 5 people enables the best level of crew safety to be assured at most operational incidents while providing sufficient resources to complete tasks successfully.

Figure 1: Degrees of suitability

Crewing appliances with only 4 people is not unambiguously unsafe. It is less safe than crewing appliances with 5 people, and it also means sacrificing operational effectiveness. Systems of work have to be adapted to minimise the increased risk created by the shortage of staff.

Crewing appliances with only 4 people does not deliver the highest level of crew safety, but as long as it only happens ***infrequently***, the probability of crew safety actually being compromised has historically been considered to be "acceptable".

MF&RS managers have stated that if Merseyside FBU opposition to default crewing levels of 4 and 4 is upheld the Service may be forced to set a minimum standard of 5 riders per appliance. They say that this would be difficult to achieve and would force appliances off the run if only 4 riders could be found. This is a false premise and is based on a misunderstanding of the process of risk management.

The management of risk does not force MF&RS to make a choice between riding 4 on all occasions or riding 5 on all occasions. It is not contradictory to say that it is reasonable to *strive to ride 5 on all occasions, but still to ride 4 from time to time*.

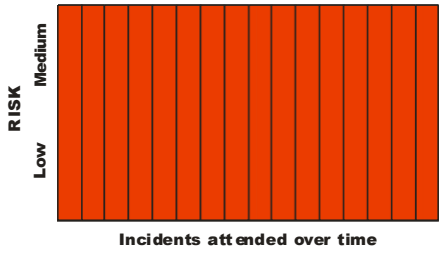
Rather than look at the risk faced by employees at single incidents, MF&RS should take a more sophisticated approach and look at the cumulative risk faced by employees who attend a large number of incidents over time (Figure 2a and 2b).

If the risk to safety when riding 5 is described as low, and the risk to safety when riding 4 is described as medium, then the cumulative risk faced by employees under the confidence level is shown by Figure 2a. The cumulative risk faced by employees under MF&RSs default 4 and 4 crewing is shown by Figure 2b.

Figure 2a

75% Confidence

Figure 2b



Default 4 + 4

Even though it was never formalised in risk management terms, it is undoubtedly this approach that was behind the old Home Office "confidence level". It is important to remember that the confidence level did not mean that it was satisfactory to ride appliances with a crew of 5 on only 75% of occasions; the confidence level was a **MINIMUN STANDARD.**

It meant Fire and Rescue Services should strive to ride appliances with a crew of 5 on **ALL** occasions, but as long as they only used crews of 4 on NO MORE THAN 25% of occasions they were keeping risk within acceptable limits.

Riding 4 and the Use of Rapid Deployment Boards

The rider position that is removed due to a default crewing level of 4 and 4 is the Breathing Apparatus Entry Control Officer (BAECO), referred to as No5 on MFRS Rescue Appliances.

Communities and Local Government Fire and Rescue Service Circular 18/2009 clearly states that-

"2.4 The Role of the Breathing Apparatus Entry Control Officer (BAECO) is essential to the safe control and support of BA operations. The skills and knowledge to carry out the BAECO role in terms of maintaining proper records on the Entry Control Board, communicating with BA teams, and the briefing and de-briefing of BA teams, is an integral part of both BA training and refresher training."

MF&RS managers are relying on the use of Rapid Deployment Boards (RDB) by the initial crew of 4 that attends. Rapid deployment boards are not intended for use all the time but only for use in "exceptional circumstances". Technical Bulletin 1/97 does not permit rapid deployment procedures to be used simply because there are only 4 firefighters available at an incident.

The simple fact is that there are degrees of suitability with breathing apparatus entry control procedures.

Using no entry control procedures is unacceptable.

Using full stage 1 or stage 2 is a safe system of work.

Using RDBs is reasonable as long as they are only used infrequently (in exceptional circumstances) and where the potential gain is high.

Again the cumulative nature of the risk to which employees are exposed must be considered when thinking about the use of Rapid Deployment Boards.

If MF&RS were riding 4 on a MAXIMUM of 25% of occasions, but striving to ride 5 all the time, then attending a house fire with a crew of 4 might be considered as "exceptional circumstances" as described in Rapid Deployment Board guidelines and the use of RDB would be reasonable.

Rapid Deployment was intended to be used in the "exceptional circumstances" of a crew of 4 arriving at an incident ahead of the crew of 5.

But MF&RS is saying that it intends to ride 4 as normal practice. BY DEFINITION, arriving at a house fire with a crew of 4 will no longer be "exceptional". It will be normal practice and the Rapid Deployment Board is not intended for normal practice.

The cumulative risk to the health and safety of personnel created by using Rapid Deployment Board on every occasion would be unacceptable and in contravention of the *Management of Health and Safety at Work Regulations* para 30, which states-

*"**Avoiding risk is the first and best principle of prevention**, introducing practices that assist in risk mitigation is the fourth best principle of prevention"*

The Fire Brigades Union believe the issue of peer or community pressure, as a result of riding 4, has not been adequately addressed, however it is discussed in the HSE's publication *Successful Health and Safety Management* (HSG 65).

An entirely probable scenario would be a person's reported fire where the casualty is not *known to be within a short distance of the entry point*, and where members of the public are watching fire and rescue service activity. Even with Rapid Deployment Board procedure, it would be unsafe for a crew of 4 to enter the building to search for a casualty. However the watching public would expect to see positive action being taken.

This pressure would very likely drive FRS personnel to put their own health and safety to one side and to enter the building anyway despite the systems and rules that are associated with RDB working to ensure health and safety. It is human nature.

This is predicted by the Health and Safety Executive document *'Successful Health and Safety Management'* (HSG 65) which says:

"After an incident or cause of ill health, many organizations find that they already had systems, rules, procedures or instructions which would have prevented the event but which were not complied with. There are many reasons why such violations' occur. The underlying causes often lie in systems which are designed without taking proper account of human factors".

The use of RDBs is supposed to be limited to infrequent exceptional circumstances because the safety controls associated with their use can go against human nature and the effect of community and peer pressure to act, even though it is unsafe to do so under the control of RDB only.

By allowing, indeed expecting RDBs to be used on every occasion (the alternative is to stand outside a burning house with persons trapped and await the arrival of the second appliance), MF&RS knowingly allows RDBs as a system for *normal use* that is designed without taking proper account of human factors. HSG 65 highlights the risk and consequence of human failings.

If MFRS believe it is safe to ride 4 + 4, which firefighter goes?

The Fire Brigades Union ask which of the firefighters necessary to do the tasks in line with the Standard Operating Procedures against which we train is not required, by adopting a 4 and 4 policy, in the initial attendance/phase at a 'standard' dwelling fire? **Simply put, which of the 9 firefighters we believe is necessary to safely tackle a dwelling house fire does this Authority believe is not required.**

1. **Incident Commande**r – Is MF&RS saying that we do not need an Incident Commander to make an initial assessment of the incident and to deploy crews according to this assessment? Is Incident Command a safety critical task and therefore a necessary measure to control the risk to which firefighters are likely to be exposed?

2. **A Team of 2 BA Wearers** – Is MF&RS saying that we do not need to deploy a team of 2 BA Wearers internally in the dwelling for rescue or firefighting? Is a team of at least 2 BA Wearers a minimum requirement for BA Procedures, and is this minimum number of BA Wearers not safety critical, and hence a necessary measure to control the risk to which firefighters are likely to be exposed?

3. **Pump Operator** – Is MF&RS saying that we do not need a pump operator to control the supply of water for firefighting or firefighter protection to the BA team which has been committed to the fire in the dwelling? Is the requirement to have a dedicated pump operator not safety critical, and hence a necessary measure to control the risk to which firefighters are likely to be exposed?

4. **BA Entry Control Officer** – Is MF&RS saying that contrary to Standard (and nationally accepted) Operating Procedures that we do not need a designated, stand alone, BA Entry Control Officer to be responsible for BA control at any dwelling fire incident? Does the F&RA intend to revise its local Standard Operating Procedures/Service Instructions in respect of BA to the extent that they deviate from nationally accepted Standard Operating Procedures in respect of the need to establish BA Entry Control before firefighters are committed in BA? Does MF&RS believe that the requirement to have a dedicated BA Entry Control Officer is not safety critical, and is not a necessary measure to control the risk to which firefighters committed in BA are likely to be exposed?

FRS Circular 18/2009 - Firefighter Safety at Operational Incidents states-

"2.4 The role of the Breathing Apparatus Entry Control Officer (BAECO) is essential to the safe control and support of BA operations. The skills and knowledge to carry out the BAECO role in terms of maintaining proper records on the Entry Control Board, communicating with BA teams, and the briefing and de-briefing of BA teams, is an integral part of both BA training and refresher training"

If this 4 and 4 crewing system is allowed to continue, then if difficult decisions are not taken i.e**. telling a crew of four to stand outside a house fire and await the arrival of the 2nd appliance**, and Incident Command Systems do fail to protect the health and safety of firefighters, MF&RS will have to accept that the situation was **reasonably foreseeable** and was of their own making. They will have to accept that the root cause was **a failure to incorporate adequate corporate health and safety management into the IRMP process.**

Determining the Emergency Response The Critical Attendance STandard (CAST)

The FBU CAST planning scenarios are based on a **Home Office Research Report** from the **Fire Cover Review** as follows:

- **Central Fire Brigades Advisory Council**
- **Response Options Planning Scenarios**
- **Version 1.1 (covering Versions 2.0 and 2.01 CFBAC Planning Scenarios 20/01/2000) Produced by the Fire Experimental Unit of the Fire Research Development Group, Crown Copyright 2000**

Government reviews, including The Pathfinder review developed 'Worst Case Planning Scenarios' (WCPS). The WCPS built on the work that had already been undertaken on Generic Risk Assessment as detailed in the *'Guide to Operational Risk Assessment'* referred to above.

By assessing the actual situation that Firefighters were faced with at emergency incidents, the WCPS methodology was then able to determine what was needed to deal with the emergency incident and what was needed to maintain risks to Firefighters (as far as reasonably practicable) at an acceptable level. The (WCPS) evolved into the 'Critical Attendance STandard' (CAST) used to determine the required emergency response. The required emergency response was determined by assessing the real situation faced by Firefighters at emergency incidents, and then planning risk-control measures which dealt with these **'real world'** situations. It sought to establish what actually happened at a range of common emergency incidents – **what the fire & rescue service was actually faced with when they turned up** – and the response and resource requirements (numbers of Firefighters and equipment) that would be required to implement effective Standard Operating Procedures. Experienced fire & rescue service Incident Commanders were interviewed to determine both the emergency incidents that were routinely faced, and the number of Firefighters and the amount and type of equipment that would be needed at these different types of emergency incident.

The Qualitative experience of these operational Crew and Watch Managers was critical to the process. They are almost always the first fire officers to arrive at an emergency incident quite simply because they are part of the crew on the fire appliances sent when an emergency call is first received by a brigade. In Fire & Rescue Service circles one of the more commonly known conclusions of this element of the Pathfinder research project is that 9 Firefighters are needed at a house fire where persons are reported as being trapped. This level of response is required to deal with the incident effectively whilst ensuring that the Firefighters who deal with the incident are not placed at greater risk than is avoidable.

The system for planning emergency responses was based on the recognised risk assessment process of identifying the hazard, assessing the risk posed by the hazard, and then determining the necessary 'control' measures necessary to reduce the risk to acceptable or the research project first sought to establish the different types of emergency incident routinely attended by the fire &rescue service. 35 identified incident scenarios were grouped into different 'types' of emergency incident as follows;

- fires in buildings;
- casualty retrieval incidents (such as water rescues and hazardous material rescues);
- casualty trapped incidents (such as road traffic incidents);
- 3 lesser scenarios (covering small fires)

Having determined the incident types, the required emergency response for a given incident scenario (for example a single occupancy house fire where it was anticipated that rescue would be necessary via an internal staircase) could then be established.

The Review of Standards of Emergency Cover and Worst Case Planning Scenario methodology was the most robust risk-based determination of the initial fire & rescue service resource requirements for routine emergency incidents that had ever been undertaken in the UK. These resources had been determined through qualitative analysis (what is known from experience) to ensure that the job could be done without compromising unnecessarily the safety of Firefighters.

A Critical Attendance STandard (CAST), methodology was established (Appendix A). The CAST methodology allows for a tightly-controlled phased arrival of fire appliances at emergency incidents. It takes account of the effect of this phased arrival on both the incident and on the ability of Firefighters to carry out Standard Operating Procedures without increasing the risk to themselves above a level which they would normally expect to face in situations which are themselves inherently risky. Determining what is an acceptable phased arrival – or **LAG** – in fire appliance attendance times i.e. the time between the arrival of the first fire appliance and the second fire appliance sent as part of the initial emergency response to an incident, is critical.

Using the Critical Attendance STandard methodology, the maximum LAG for Standard Operating Procedure purposes is:

APPLIANCE ARRIVAL MAXIMUM LAG

APPLIANCE ARRIVAL	MAXIMUM LAG
arrival of first fire appliance to arrival of second fire appliance	**3 minutes**
arrival of second fire appliance to arrival of third fire appliance	**2 minutes**

Hence IRMP attendance times of 5mins, 8mins and 10mins

The maximum 3 minute LAG between the arrival of the first & second fire appliances at an incident **assumes an attendance of 5 Firefighters on the first fire appliance** to attend every incident covered by a CAST planning scenario. Without 5 Firefighters on the first fire appliance cornerstones of the Fire Authorities IRMP (Attendance Times) are seriously flawed.

The 3 minute LAG reflects:

> the time required for an initial assessment of the incident to be made by the first attending fire & rescue service Incident Commander;
>
> the time required for initial briefing and deployment of crews (including where necessary deployment in breathing apparatus) before the arrival of the second fire appliance.

The maximum 2 minute LAG between the arrival of the second & third fire appliances at an incident covered by a CAST planning scenario reflects:

> the time required for the Incident Commander to brief the Crew Manager of the second fire appliance attending the incident and for the crew from the second fire appliance to be deployed, prior to the arrival of the third fire appliance.

Increasing LAG above these maximums potentially compromises the safety of Firefighters who will be left with insufficient resources to work within Standard

Operating Procedures (Service Instructions) and safe systems of work at emergency incidents. Any risk assessments which seek to introduce or justify excessive LAG times will have failed to risk assess the real situation faced by Firefighters at emergency incidents. In short, the risk assessment will not be suitable and sufficient. Where the required number of personnel and equipment for an emergency incident can be transported in one fire appliance the LAG times clearly do not apply

Procedures against which Firefighters are training simply can not be put into practice in the real world due to a lack of resources being available when they were most needed – in the early stages of the incident. The simple fact remains that on too many occasions Firefighters have no alternative other than to act when faced with the incident. They are, after all, the professionals who have been sent to deal with an emergency situation, and there is a public expectation that they will act when they arrive.

When someone is screaming at you to act, to rescue their parent, their partner or their child, and you are there as part of the fire service response, it does not matter how *'self-disciplined to work within accepted systems of work'* you may be, a Firefighter will act. These are not individual decisions. Such is the frequency that they have become accepted group decisions amongst Firefighters throughout the service. In short – they are given no alternative.

The FBU believe that the policy of a supposed default 4 and 4 crewing level means firefighters will have been knowingly placed in a situation by their employer where it is reasonably foreseeable that they will be motivated or pressurized to act unsafely in the interests of saving life. The pressure to act unsafely will be as a result of a deliberate planning decision which delays the arrival of the necessary resources for an emergency incident which can be reasonably expected to occur.

"… it is essential to avoid situations which could motivate or pressurise firefighters to act unsafely in the interests of saving life."

(Review of Standards of Emergency Cover - Technical Paper C – Response & Resource Requirements)

Finally MF&RS cannot rely on the arguments that:

Riding 4 and 4 has been happening and so far nothing has happened so therefore it is safe?

or

Crews are not reporting dangerous occurrences so none are happening?

This methodology is flawed as it asks those at the sharp end to admit to not observing procedures. There are many SOPs/SIs that contain the expression 'under no circumstances'; or in an attempt to control activities include several do's and don'ts with many rule-based bullet pointed lists designed to further control the risk-taking behavior of those at the sharp end?

A simple example is that of a house fire with confirmed knowledge that victims of fire are present where previous incidents have identified that regardless of procedures, circumstances have occurred outside of SOPs/SIs. There are many procedures that use phrases such as 'under no circumstances' to control action in such a victim centered environment. Do you realistically expect firefighters who do affect an entry despite such behavior controls to own up to application of an unconventional system?

Clearly there are activities that occur at operational incidents which sit outside SOPs/SIs and are unconventional or that may briefly make the working environment unsafe, these occasions will become the norm due to the 4 and 4 policy. However, because people believe they can get into some kind of trouble for failing to observe the rules they do not report unconventional activities or unsafe events and keep their fingers crossed that nobody else will either. Seeing SOPs/SIs involved in failure can attract professional criticism for those managers involved in their design and implementation.

Merseyside Fire and Rescue Authority stands alone in the UK Fire Service as the only Fire and Rescue Service that has a policy of riding 4 + 4

The Fire Brigades Union highlight these legitimate concerns because if left unchallenged the issue of riding 4 + 4, we feel, may ultimately be addressed by prosecutors.

Incident Group	Incident Type	CAST Scenario Descrip- tion	Ref.No.	Minimum Command Personnel & Firefighters Required I Initial response
FDR 1 Fires: Dwellings	Multiple Occu- pancy High Rise	2 to 4 casualties involved Rescue via internal staircase	CAST 1	Command 2 Firefighters 11 TOTAL 13
	Multiple Occu- pancy Low Rise	2 to 4 casualties involved Rescue via 135 ladder	CAST 2	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via 9/105 ladder	CAST 3	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 4	Command 1 Firefighters 8 TOTAL 9
	Multiple Occu- pancy Medium Rise	2 to 4 casualties involved rescue via 135 ladder	CAST 5	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via 9/105	CAST 6	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 7	Command 2 Firefighters 11 TOTAL 13
		2 to 4 casualties rescue via internal staircase	CAST 8	Command 1 Firefighters 8 TOTAL 9
	Multiple Occu- pancy Single Basement	2 to 4 casualties involved rescue via internal staircase	CAST 9	Command 1 Firefighters 9 TOTAL 9
	Single Occupancy	2 to 4 casualties involved rescue via 9/105 ladder	CAST 10	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 11	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 12	Command 1 Firefighters 8 TOTAL 9
	Underground Complex	2 to 4 casualties involved using Firefighting lift	CAST 13	Command 2 Firefighters 12 TOTAL 14

Incident Group	Incident Type	CAST Scenario Description	Ref. No.	Minimum Command Personnel & Firefighters Required in Initial re- sponse
Special Services: CASUALTY RETRIEVAL FROM:	Hazardous Material Incident	Generic incident - BA CPS with HRJ 1 casualty retrieved	CAST 14	Command 3 Firefighters 15 TOTAL 18
		Generic incident – BA GTS with HRJ 1 casualty retrieved	CAST 15	Command Firefighters TOTAL 18
	Height	Rope rescue equipment 1 casualty retrieved	CAST 16	Command 2 Firefighters 9 TOTAL 9
		With 135 extension ladder 1 casualty retrieved	CAST 17	Command 1 Firefighters 4 TOTAL 5
		With 9/105 extension ladder 1 casualty retrieved	CAST 18	Command 1 Firefighters 3 TOTAL 4
		With aerial appliance 1 casualty retrieved	CAST 19	Command 1 Firefighters 3 TOTAL 4
	Lift	Lift 1 casualty retrieved	CAST 20	Command 1 Firefighters 4 TOTAL 5
	Lock-in	Conventional 1 casualty retrieved	CAST 21	Command 1 Firefighters 2 TOTAL 3
		With 135 extension ladder 1 casualty retrieved	CAST 22	Command 1 Firefighters 4 TOTAL 5
		With 9/105 extension ladder 1 casualty retrieved	CAST 23	Command 1 Firefighters 3 TOTAL 4
		With aerial appliance 1 casualty retrieved	CAST 24	Command 1 Firefighters 3 TOTAL 4
		With short extension ladder 1 casualty retrieved	CAST 25	Command 1 Firefighters 2 TOTAL 3
	Water	1 casualty retrieved	CAST 26	Command 2 Firefighters 5 TOTAL 7

Incident Group	Incident Type	CAST Scenario Descrip- tion	Ref.No.	Minimum Command Personnel & Firefighters Required I Initial response
FDR 1 Fires: Dwellings	Multiple Occu- pancy High Rise	2 to 4 casualties involved Rescue via internal staircase	CAST 1	Command 2 Firefighters 11 TOTAL 13
	Multiple Occu- pancy Low Rise	2 to 4 casualties involved Rescue via 135 ladder	CAST 2	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via 9/105 ladder	CAST 3	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 4	Command 1 Firefighters 8 TOTAL 9
	Multiple Occu- pancy Medium Rise	2 to 4 casualties involved rescue via 135 ladder	CAST 5	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via 9/105	CAST 6	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 7	Command 2 Firefighters 11 TOTAL 13
		2 to 4 casualties rescue via internal staircase	CAST 8	Command 1 Firefighters 8 TOTAL 9
	Multiple Occu- pancy Single Basement	2 to 4 casualties involved rescue via internal staircase	CAST 9	Command 1 Firefighters 9 TOTAL 9
	Single Occupancy	2 to 4 casualties involved rescue via 9/105 ladder	CAST 10	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 11	Command 1 Firefighters 9 TOTAL 10
		2 to 4 casualties involved rescue via internal staircase	CAST 12	Command 1 Firefighters 8 TOTAL 9
	Underground Complex	2 to 4 casualties involved using Firefighting lift	CAST 13	Command 2 Firefighters 12 TOTAL 14

Incident Group	Incident Type	CAST Scenario Descrip- tion	Ref. No.	Minimum Command Personnel & Firefighters Required in Initial response
Special Ser- vices: Casualty Trapped	Extrication from Machinery / Structures	1 casualty trapped	CAST 27	Command 2 Firefighters 6 **TOTAL 8**
	Rail Transport Above Ground Accident	2 carriages 1 casualty trapped in each carriage	CAST 28	Command 2 Firefighters 11 **TOTAL 13**
	RTA	Generic incident 2 vehi- cles 1 casualty trapped in each vehicle	CAST 29	Command 1 Firefighters 9 **TOTAL 10**
	Ship Accident	1 ship 2 casualties trapped	Cast 30	Command 2 Firefighters 9 **TOTAL 11**
	Small Aircraft Accident	1 aircraft 2 casualties trapped LX foam branch	Cast 31	Command 1 Firefighters 9 **TOTAL 11**
	Small Boat Accident	1 small boat 1 casualty trapped	Cast 32	Command 1 Firefighters 6 **TOTAL 7**
FDR1 Fires: Property Other than Buildings		Generic small fire	Cast 33	Command Firefighters 3 **TOTAL 4**
FDR 3 Fires	Chimney	Generic small fire	Cast 34	Command 1 Firefighters 4 **TOTAL 13**
	Secondary	Generic small fire	Cast 35	Command 1 Firefighters 3 **TOTAL 4**