

# **Integrated Risk Management**

**A Brief Outline of the Methodology and data used by  
West Midlands Fire and Civil Defence Authority in the  
Production of the Integrated Risk Management Plan  
and Associated Action Plans**

# Introduction

The West Midlands Fire and Civil Defence Authority carried out extensive analysis of the incident data in order to comply with Fire Service Circular 7/2003, to enable them to satisfy the requirement to produce its first Integrated Risk Management Plan and Action Plan in April 2004. In year 2 the decision is to produce a second year Action Plan

To be able to quantify and qualify our Integrated Risk Management Plan (IRMP) Year 2 Action Plan our intervention data has been vigorously interrogated and challenged, along with the continuing resource management risk control measures constantly in operation by our Fire Control. It is because of this, as detailed below, that we can state, the service will be unaffected.

The justification for choosing a location for change is purely driven by the ability to provide effective emergency response to best meet the risk and needs of our community. In determining where to position our resources, it has been necessary to take account of all factors as detailed.

## **Analysis**

The analysis carried out by the Integrated Risk Management (IRM) team on behalf of the Fire Authority; determines the number and location of resources required to meet the needs of the intervention risk brigade wide. This is based on 6 years worth of actual incident data and therefore factors in the following:-

- All incidents we attend including fires and non-fires, and appliance movements to support these.
- Incident type – risk appropriate response/Pre-determined attendance (PDA).  
The emergency response was factored on existing planning arrangements. For example, prior to IRM it was considered risk appropriate to respond to high rise buildings with 4 pumps, post IRM this will remain as will:
  - the ability to continue to identify any premises that require an augmented PDA
  - the ability through dynamic risk assessment for the Officer in Charge to increase as appropriate
- Actual resources mobilised including simultaneous incidents.
- Actual timescales that fire engines are unavailable.
- Actual time of call, reaction times and attendance times (which enables us to determine actual travel times).
- Incident impact e.g. degree of damage, number of jets, etc

Then this data is averaged out (although peaks of activity are a consideration), to this is added 3 levels of resilience. Following this it has been identified that the maximum for any period within any 24 hour period is 47 appliances. For the periods of 0000-0800, this is 33; a further Conventional, Chemical, Biological, Radiation and Nuclear (CCBRN) resilience of 14 has been added, totalling 47 appliances, hence the Action Plan.

## ***Attendance Standards***

This original analysis also enabled us to calculate the average attendance standards we were actually achieving i.e. 1st appliance in 5 minutes and 2nd in 7 minutes; this then was applied as the standards we would maintain. This standard is therefore factored into the intervention levels determination. Attendance times are constantly monitored. We can confirm that we are achieving these average attendance times 100%.

It should be noted that attendance standards, both in what we send and the times in which they arrive, exceed the previous and current recommended standards, e.g. 1959 Standards of Fire Cover, Fire Service Emergency Cover (FSEC) and the representative bodies proposals.

It is because of the above that we can make the statement - there will be no reduction in standards. This includes the research done into injuries to firefighters, in that it is the activity involved and not the location which is the main concern and this has been addressed by factoring in risk appropriate levels of response to all incidents.

## ***Analysis Results***

Now having the ability to interrogate our data to this degree allows us to challenge some long standing assumptions and confirm our decisions. These include:-

- Resource location
- Level of all intervention activity.
- Level of large scale incidents(10 pumps and above)
- Level of damage.
- Level of fatal fires.
- 

The results of this second interrogation reveal that in all cases the likelihood of any of these occurring during 0000-0800 is significantly reduced. The level of fatalities as a result of fire, across the West Midlands area, is **lowest** during this period. In fact we are four times less likely to have to respond to any incident between these hours.

With regard to the larger incidents, in this 5 year period we have had 103 incidents within the West Midlands area of make pumps 10 or above. Again, we have our lowest count during the period concerned, this equates to:-

00:00 – 07:59	27
08:00 – 15:59	29
16:00 – 23:59	47

## ***Resource Management***

Although this is a service wide view, to maintain these standards, the level of risk based fire cover within any given area will be unaffected by these proposals. That means there will be appropriate fire cover within the West Midlands.

The resource management for the West Midlands Fire Service, using risk control measures, will be maintained, as it has been for the past 30 years. Local fire cover is not and has not been solely provided by local appliances. All West Midlands fire appliances provide cover where required within the West Midlands area, and beyond, as there has, since 1947, been a legislative requirement to provide over the border cover.

Fire Control consistently moves appliances from neighbouring areas to maintain a resilient emergency response. This is done both pro-actively and reactively to ensure cover is in place before the next call is received, and usually involves a number of smaller travel distance based moves.

To this must be added that fact that during our day and part of the night shifts, during our busiest intervention activity, it has always been risk appropriate to remove appliances across the service, for risk critical training, appliance servicing, and prevention based activities. This is managed by Fire Control.

## ***Prevention and Protection***

Additionally, any new building developments have to conform to the building regulations. These regulations, specifically Approved Document B, relate to fire safety within the built environment. The Protection Section monitors new structures. This section, together with the Building Control Bodies, would not permit structures to be built if they did not provide adequate means of escape in case of fire, adequate means for preventing fire spread or affording access by firefighters. It is a legal requirement that the Fire Service is involved in the building regulations procedures and as such all such developments have been taken into account. Should the Fire Service become aware of any premises, new or old, that present a serious life risk then immediate enforcement action would be taken to prevent the threat from being realised.

Similarly, premises providing public entertainment, food and drink, are covered by the Licensing Laws, as with the risk control measures applied in new buildings, the Fire Service regularly inspects and comments on the fire safety arrangements within such premises.

## ***Community Risk Management***

It must be borne in mind that Community Risk Management is not purely achieved by fire stations, or fire engines alone. The public should now be reassured that, in addition to this intervention resource, we are actively providing another risk control measure through prevention work. Although, we will ensure our fire engines are in the right place if you do have a fire, we would rather work with you to prevent it from happening in the first place. It is this integrated approach that will ensure that West Midlands is safer.

Note: The resilience built into the system includes 2 x standard deviation (this is a recognised industry standard, plus contingency, this equalled 43 pumps for our busiest period, despite this an additional 4 were added in to raise the total to 47.

As we have the ability to analyse on a minute by minute basis it can be confirmed that the maximum usage, service-wide, in the last 6 years was 44 appliances, this happened once and was for duration of 1 minute and occurred around 7pm.